



U.S. Fish & Wildlife Service  
Region 3 - Great Lakes/Big Rivers

# *Implementing the Vision:*

*Report to Fisheries Partners and Stakeholders*

*FY 2005*



# Great Lakes - Big Rivers Region

## Message from the Assistant Regional Director for Fisheries

The Fisheries Program in Region 3 (Great Lakes – Big Rivers) is committed to the conservation of our diverse aquatic resources and the maintenance of healthy, sustainable populations of fish that can be enjoyed by millions of recreational anglers. To that end, we are working with the States, Tribes, other Federal agencies and our many partners in the private sector to identify, prioritize and focus our efforts in a manner that is most complementary to their efforts, consistent with the mission of our agency, and within the funding resources available.

At the very heart of our efforts is the desire to be transparent and accountable and, to that end, we present this Region 3 Annual Fisheries Accomplishment Report for Fiscal Year 2005. This report captures our commitments from the Region 3 Fisheries Program Operational Plan, Fiscal Years 2004 & 2005 and documents our efforts to follow through on those commitments.

This document cannot possibly capture the myriad of activities that are carried out by any one station in any one year, by all of the dedicated employees in the Fisheries Program, but, hopefully, it provides a clear indication of where our energy is focused. This is a work in progress and we welcome your feedback on not only how to improve this document, but also on how we can better conserve all of our aquatic resources and recreational fishing opportunities. Thank you for taking the time to review this document and your efforts to help conserve our precious aquatic resources.

Gerry Jackson

Assistant Regional Director  
Fisheries

## Introduction

The Fisheries Program of the U.S. Fish and Wildlife Service (Service) has played a vital role in conserving and managing fish and other aquatic resources since 1871. Today, the Fisheries Program is a critical partner with States, Tribes, other governments, other Service programs, private organizations, public institutions, and interested citizens in a larger effort to conserve these important resources. In 2002, working with its many partners in aquatic conservation through the Sport Fishing and Boating Partnership Council's Fisheries Steering Committee, the Service completed its strategic vision for the Fisheries Program: "Conserving America's Fisheries, U.S. Fish and Wildlife Service Fisheries Program, Vision for the Future." The Vision includes goals, objectives, and action items on a national scale for the Fisheries Program.

The Great Lakes/Big Rivers Region (Region) Operational Plan is an extension of the Vision, describing more specifically the activities that the Regional Fisheries Program will implement in Fiscal Years 2004 and 2005. This accomplishment report addresses the commitments from the Operational Plan. The Fisheries Program and its partners and stakeholders recognize that responsibilities for managing and conserving many fish and other aquatic resources are shared, and overall success is contingent upon the combined knowledge, resources and commitment of each party. Therefore, the Region views this accomplishment report as a general contract between us and our partners and stakeholders. Specific species and habitat targets are identified in individual species management plans. For more information about management plans or for a listing of plans, please contact your local office or the Regional Office (612-713-5111).

**Front Cover: Biologists Corey Lee, Wyatt Doyle, and Nick Frohnauer load Missouri River pallid sturgeon brood stock for transport. The fish will be used as a source of eggs as part of the Pallid Sturgeon Recovery Plan. (USFWS photo)**

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# Great Lakes - Big Rivers Region Fisheries Field Offices

## National Fish Hatcheries

The Region's National Fish Hatcheries primarily focus on native fish restoration/rehabilitation by stocking fish and eggs, such as pallid and lake sturgeon and by developing and maintaining brood stocks of selected fish strains, such as lake trout and brook trout. Hatcheries also provide technical assistance to other agencies, provide fish and eggs for research, stock rainbow trout in fulfillment of federal mitigation obligations and assist with recovery of native mussels and other native aquatic species.

## Sea Lamprey Control Stations

Sea Lamprey Control Stations assess and control sea lamprey populations throughout the Great Lakes. The U.S. Department of State and Canadian Department of Fisheries and Oceans fund this program through the Great Lakes Fishery Commission.

## Fishery Resources Offices

Fishery Resources Offices conduct assessments of fish populations to guide management decisions, perform key monitoring and control activities related to invasive, aquatic species; survey and evalu-

ate aquatic habitats to identify restoration/rehabilitation opportunities; play a key role in targeting and implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key inter-agency fisheries databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and re-licensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities. In other Regions of the Service, FRO's are also referred to as Fish and Wildlife Management Assistance Offices.

## Fish Health Center

The Fish Health Center provides specialized fish health evaluation and diagnostic services to federal, state, tribal and private hatcheries in the region; conducts extensive monitoring and evaluation of wild fish health throughout the region; examines and certifies the health of captive hatchery stocks; and, performs a wide range of special services helping to coordinate fishery program offices and partner organizations.

Great Lakes - Big Rivers Region Fisheries Field Offices



# Great Lakes - Big Rivers Regional Fisheries Offices

Regional Office, 1 Federal Drive, Fort Snelling, MN 55111-4056; 612/713-5111

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# Conserving America's Fisheries

## Fisheries Program Vision for the Future

### *Region 3 Focus Areas*

#### **1. Partnerships and Accountability**

Partnerships are essential for effective fisheries conservation. Many agencies, organizations, and private individuals are involved in fisheries conservation and management, but no one can do it alone. Together, these stakeholders combine efforts and expertise to tackle challenges facing fisheries conservation. The success of these partnerships will depend on strong, two-way communications and accountability.

#### **2. Aquatic Species Conservation and Management**

The Fisheries Program maintains and implements a comprehensive set of tools and activities to conserve and manage self-sustaining populations of native fish and other aquatic resources. These tools and activities are linked to management and recovery plans that help achieve restoration and recovery goals, provide recreational benefits, and address Federal trust responsibilities. Sound science, effective partnerships, and careful planning and evaluation are integral to conservation and management efforts.

#### **3. Aquatic Invasive Species**

Aquatic invasive species are one of the most significant threats to fish and wildlife and their habitats. Local and regional economies are severely affected with control costs exceeding \$123 billion annually. The Fisheries Program has focused its efforts on preventing introductions of new aquatic invasive species, detecting and monitoring new and established invasives, controlling established invasives, providing coordination and technical assistance to organizations that respond to invasive species problems, and developing comprehensive, integrated plans to fight aquatic invasive species

#### **4. Public Use**

As the population in the United States continues to grow, the potential for adverse impacts on aquatic resources, including habitat will increase. At the same time, demands for responsible, quality recreational fishing experiences will also increase. The Service has a long tradition of providing opportunities for public enjoyment of aquatic resources through recreational fishing, habitat restoration, and education programs and through mitigating impacts of Federal water projects. The Service also recognizes that some aquatic habitats have been irreversibly altered by human activity (i.e. - dam building). To compensate for these significant changes in habitat and lost fishing opportunities, managers often introduce non-native species when native species can no longer survive in the altered habitat.

#### **5. Cooperation with Native Americans**

Conserving this Nation's fish and other aquatic resources cannot be successful without the partnership of Tribes; they manage or influence some of the most important aquatic habitats both on and off reservations. In addition, the Federal government and the Service have distinct and unique obligations toward Tribes based on trust responsibility, treaty provisions, and statutory mandates. The Fisheries Program plays an important role in providing help and support to Tribes as they exercise their sovereignty in the management of their fish and wildlife resources on more than 55 million acres of Federal Indian trust land and in treaty reserved areas.

#### **6. Leadership in Science and Technology**

Science and technology form the foundation of successful fish and aquatic resource conservation and are used to structure and implement monitoring and evaluation programs that are critical to determine the success of management actions. The Service is committed to following established principles of sound science.

#### **7. Aquatic Habitat Conservation and Management**

Loss and alteration of aquatic habitats are principal factors in the decline of native fish and other aquatic resources and the loss of biodiversity. Seventy percent of the Nation's rivers have altered flows, and 50 percent of waterways fail to meet minimum biological criteria.

#### **8. Workforce Management**

The Fisheries Program relies on a broad range of professionals to accomplish its mission: biologists, managers, administrators, clerks, animal caretakers, and maintenance workers. Without their skills and dedication, the Fisheries Program cannot succeed. Employees must be trained, equipped and supported in order to perform their jobs safely, often under demanding environmental conditions, and to keep current with the constantly expanding science of fish and aquatic resource management and conservation.

The vision of the Service's Fisheries Program is working with partners to restore and maintain fish and other aquatic resources at self-sustaining levels and to support Federal mitigation programs for the benefit of the American public.

Implementing this vision will help the Fisheries Program do more for aquatic resources and the people who value and depend on them through enhanced partnerships, scientific integrity, and a balanced approach to conservation.

# Partnerships and Accountability

## *Partnerships*

**Our Goal:** Open, interactive communication between the Fisheries Program and its partners.

*Our primary focus is on developing and improving relationships with our stakeholders and partners.*

**Our Objective** Strengthen government, Tribal, and non-governmental relationships in the Great Lakes-Big Rivers Region to promote collaborative conservation strategies for conserving aquatic resources.

### Our Commitment

#### – The Fisheries Program will:

- Initiate frequent informal communications with State, Tribal, Federal, Non-governmental organizations, partners, and other programs of the Service to identify and resolve aquatic resource management problems, explore new opportunities, and maintain productive working relationships.
  - “...initiated many formal and informal communications with agencies and organizations...”
- Participate in meetings held by partners to broaden the Program’s perspective and appreciation of the range of issues collectively faced by resource managers.
  - “...participated in meetings with other agencies and organizations when invited...”
- Work with the Mississippi Interstate Cooperative Resources Association (MICRA) and the Great Lakes Fishery Commission to conserve native species.
  - “...provided support and funding for the MICRA coordinator through an Interagency Personnel Agreement; signed a Memorandum of Agreement with the Great Lakes Fishery Commission covering the participation of regional office and field office staff as members, observers, and alternates on 55 task forces and committees, as coordinated under the Strategic Plan for Management of Great Lakes Fisheries, toward achieving Great Lakes fish community objectives...”
- Work with the Great Lakes Regional Collaboration and various other task forces and committees to restore aquatic resources in the Midwest.
  - “...co-chaired the Great Lakes Regional Collaboration’s Aquatic Invasive Species Strategy Team with staff support, submitted a plan to the Collaboration’s Executive Committee, who merging action plans submitted by all eight Strategy Teams into the “Strategy to Restore and Protect the Great Lakes”; participated in the 2005 State of the Lakes Ecosystem Conference, coordinated by the Great Lakes Commission, which is held every two years and focuses on the state of aquatic systems and environmental quality indicators, several of which are maintained by the Fish and Wildlife Service...”



-USFWS  
A U.S. Geological Survey crew implants a transmitter into a sturgeon captured by the Columbia FRO on the Lower Missouri River. Tracy Hill (Columbia FRO; background, left) and Acting Director Matt Hogan (background, right) observe the process.



-USFWS photo by Anjanette Bowen  
Alpena FRO participated in a stakeholder meeting held by the St. Marys River Fishery Task Group in Sault Ste. Marie, Michigan, and Ontario. Alpena FRO currently chairs the multi-national and multi-agency group.



-USFWS  
This is an aerial view of the Lower Hamburg Bend chute on the Missouri River. It was constructed by the U.S. Army Corps of Engineers as part of the Missouri River Mitigation Program.

## Partnerships and Accountability



-USFWS

A variety of conservation measures have been implemented since 2001 by the U.S. Army Corps of Engineers, with assistance from the interagency Mussel Coordination Team, to save the Federally endangered Higgins' eye pearlymussel from extinction.



Ozark Cavefish

-USFWS

Rare Ozark cavefish inhabit one of the springs that supply water to the Neosho NFH. Hatchery staff continue efforts to protect the area surrounding the spring and educate the public about this unique native fish.



-GLFC

Biologists and technicians from the Sea Lamprey Control program met for a day in a Northern Michigan stream with their Canadian counterparts to conduct a "train the trainers" session on how to identify and inventory larval sea lamprey habitats.

- **Jordan River and Iron River National Fish Hatcheries will:**
  - Develop a Friends Group to help foster interactions between the local communities and the Hatcheries (MI, WI). **(FY05 and FY06 Department of the Interior Performance Measure).**
  - "... have developed a Friends group for the Iron River NFH with a current membership of 27 to help foster interactions between the local communities and the hatchery, and continue efforts to establish a Friends group at the Jordan River NFH in FY 2006..."**
- Neosho National Fish Hatchery held an Annual Friends Picnic to recognize their Friends group and show appreciation.
- Marquette Biological Station coordinated with the Great Lakes Fishery Commission, U. S. Army Corps of Engineers, Emmet County, and Edison Sault Electric to complete construction of a new sea lamprey barrier in the Carp River and a new sea lamprey trap in the St. Marys River; consulted with other Fish and Wildlife Service programs, Michigan DNR, U. S. Army Corps of Engineers, local governments, and private landowners to ensure sea lampreys remained blocked on six fish passage projects.

### Spotlight on Partnerships

Successful international partnerships in the Great Lakes have included restored fish populations, protected habitats, and enhanced recreational fisheries. Partners in the Great Lakes include 8 states, 10 tribes, the Province of Ontario, Federal agencies in the U.S. and Canada, non-governmental organizations, industry, and international organizations like the Great Lakes Fishery Commission. Since its formation in 1954, the Commission has looked to the Service as a partner in controlling the invasive sea lamprey and supporting the restoration and maintenance of the \$4 billion Great Lakes sport fishery. These partnerships restored lake trout in Lake Superior, one of the world's largest bodies of freshwater.

Through the Great Lakes Fish and Wildlife Restoration Act, the Fisheries Program has funded nearly \$3.3 million in state and tribal projects to restore Great Lakes fishery resources. Projects focus on 32 fisheries restoration recommendations submitted in a 1995 report to Congress, as well as priorities of the Lake Committees, articulated in Fish Community Objectives for each of the Great Lakes.

The U.S. General Accounting Office (GAO) released a report in April, 2003, describing 148 Federal and 51 state programs that fund environmental restoration activities in the Great Lakes Basin. Among the findings, the GAO report indicated that only eight of those federal or state programs report outcome information. Of the eight programs, the GAO report cites two Service programs, sea lamprey control and stocking depleted lake trout populations, as examples. The Service conducts sea lamprey control operations as the U.S. agent in partnership with the Great Lakes Fishery Commission, Fisheries and Oceans Canada, and the U. S. Geological Survey.



# Partnerships and Accountability

## Accountability

**Our Goal: Effective measuring and reporting of the Fisheries Program's progress toward meeting short-term and long-term fish and other aquatic resource conservation goals and objectives.**

*Our primary focus is on developing effective accountability measurements and reporting.*

### **Our Objectives**

- Improve communication and accountability to States, Tribes, partners, and other stakeholders regarding plans, accomplishments, and commitments.
- Manage Fisheries Program activities and funding to maximize performance.
- Improve the transfer of information developed by the Fisheries Program to States, Tribes, partners, and other stakeholders.

### **Our Commitment**

#### **- The Fisheries Program will:**

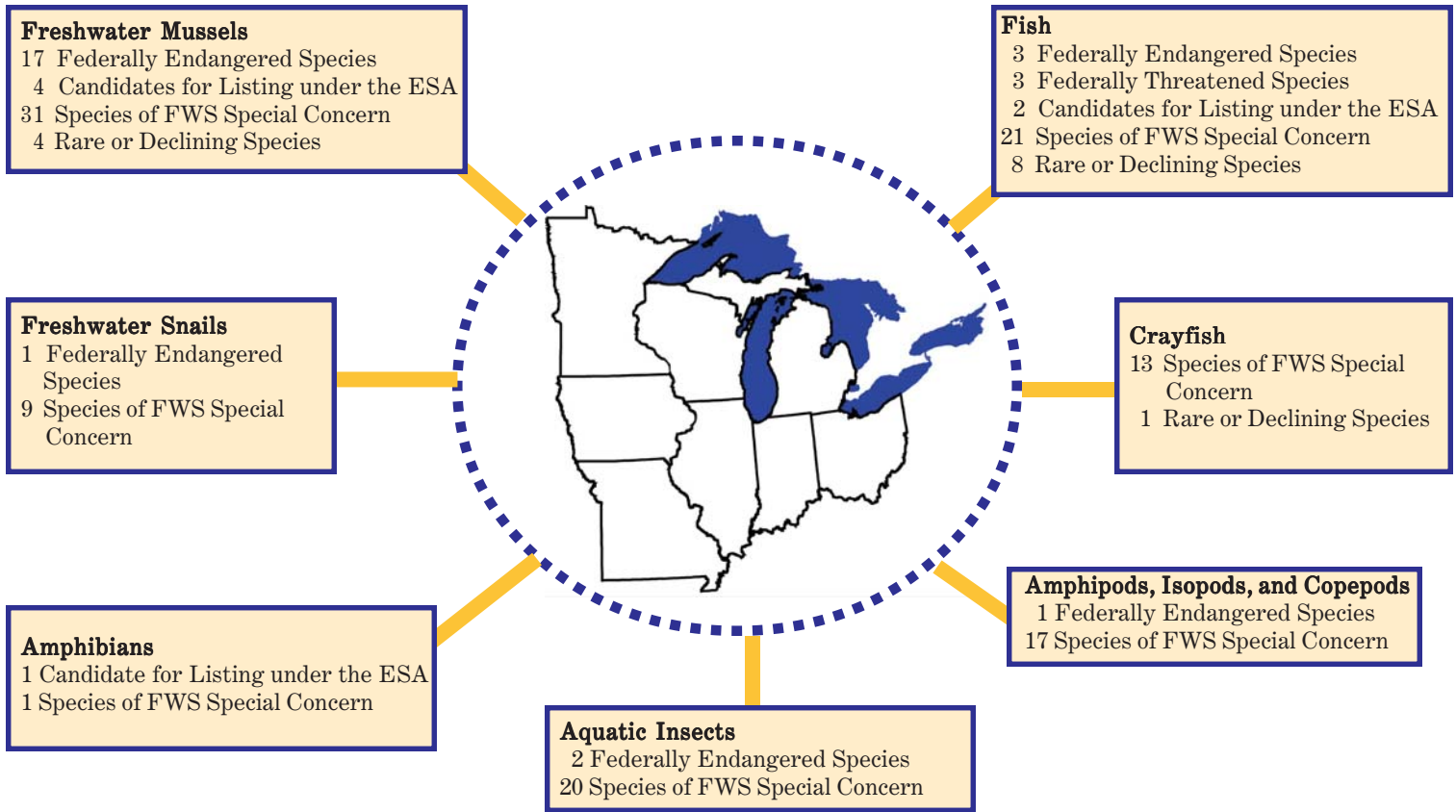
- Meet at least annually with State and Tribal fish and wildlife agency representatives and non-governmental organizations to coordinate activities.  
“...met with most State and Tribal agencies to coordinate activities...”
- Prepare an annual report on the Fisheries Program's accomplishments.  
“...developed an annual report of accomplishments based on our “Region 3 Fisheries Program Operational Plan Fiscal Years 2004 & 2005”...”
- Manage our funds to maximize Fisheries Program performance.  
“...will have near 100 percent of FY 2005 funds allocated to accomplish critical mission related activities, and met all assigned performance measures...”
- Develop accomplishment reports and provide summaries to State and Tribal partners and stakeholders.  
“...provided accomplishments to partners and stakeholders through *Fish Lines*, station reports, regional and station websites, and email links...”
- Participate in Government Accounting Office (GAO) audits of the Service.  
“...audits of the Fisheries program by the GAO did not occur in FY 2005...”
- Participate in audits of the Service's financial management records by KPMG, which is a private auditing firm.  
“...was no requirement for additional information from the Region 3 Fisheries program from KPMG; the main areas of review were completed during the FY 2003 audit period...”
- Participate in an independent performance evaluation conducted by the Sport Fishing and Boating Partnership Council.  
“...cooperated with the Sport Fishing and Boating Partnership Council independent evaluation...”
- Communicate regularly with our partners and stakeholders through *Fish Lines*, a monthly account of performance highlights. (<http://www.fws.gov/midwest/Fisheries/library/fishlines.htm>) sent approximately 250 hard copies of *Fish Lines* monthly to individuals/groups which include our key partners and stakeholders, or emailed hot-links monthly for those that prefer to view accomplishments over the web...”
- Maintain an informative website on the internet. (<http://www.fws.gov/midwest/Fisheries/>)  
“...maintained our Regional Fisheries website as a one-stop shopping site for our program with links to other partners and stakeholders...”
- Participate in the March Madness Hill visits and events.  
“...participated actively in March Madness Hill visits and events; Regional supervisors and all project leaders participated in 32 visits to Congressional members/staff...”

## some of our **Partners and Stakeholders**

1854 Authority  
 American Fisheries Society  
 American Sportfishing Association  
 Audubon Society  
 Bad River Band of Lake Superior Tribe of Chippewa Indians  
 Badger Fly Fishers  
 BASS Federation  
 Bass Pro Shops  
 Bay Mills Indian Community  
 Bois Forte (Nett Lake) Lake Superior Band of Chippewa Indians  
 Brice Prairie Foundation  
 Bureau of Indian Affairs  
 Cabela's  
 Cheboygan Sportsmans Club  
 Chippewa Ottawa Resource Authority (CORA)  
 Cleveland Museum of Natural History  
 Crawford County Land Conservation Department  
 Department of Defense  
 Department of Fisheries and Oceans - Canada  
 DTE Energy  
 East Jordan Snowmobile Club  
 Falling Rock Walleye Club  
 Federal Emergency Management Authority  
 Fond du Lac (Lake Superior) Band of Chippewa Indians  
 Forest County Potawatomi Community  
 Friends of Pendills Creek Hatchery  
 Friends of the Big Muddy  
 Friends of the Jordan River Valley  
 Friends of the Neosho National Fish Hatchery  
 Friends of the Upper Mississippi River Fishery Services  
 Friends of the Upper Mississippi River Refuges  
 Grand Portage (Lake Superior) Band of Chippewa Indians  
 Grand River Partners Inc. (Ohio)  
 Grand Traverse Bay Band of Ottawa & Chippewa Indians  
 Great Lakes Fishery Commission  
 Great Lakes Indian Fish & Wildlife Commission  
 Great Lakes Sportfishing Council  
 Hannahville Indian Community  
 Hawkeye Fly Fishing Association  
 Ho-Chunk Nation of Wisconsin  
 Hungry Canyons Alliance  
 Illinois Department of Natural Resources  
 Indiana Department of Natural Resources  
 Iowa Department of Natural Resources  
 Iowa State University  
 Izaak Walton League  
 Keweenaw Bay Indian Community  
 Kickapoo Valley Resource Management Board  
 Lac Courte Oreilles Band  
 Lac du Flambeau Band of Lake Superior Chippewa Indians  
 Lac Vieux Desert Band of Lake Superior Chippewa Indians  
 LaCrosse County Conservation Alliance  
 LaCrosse County Dept. of Land Conservation  
 Lake Metro Parks (Ohio)  
 Lake Michigan Fisheries Forum-17 members  
 Leech Lake Band of Ojibwe  
 Legend Lake Property Owners Association  
 Little Manistee River Watershed Conservation Council  
 Little River Band of Ottawa Indians  
 Little Traverse Bay Bands of Odawa Indians  
 Living Lands and Waters  
 Lower Sioux Indian Community in Minnesota  
 Lower Sioux Mdewakanton Indian Community  
 M.A.K.O. Fly Fisher's Association  
 Mancelona Rotary  
 Manistique Papers Inc.  
 Manitou Bluffs Conservation Group (Missouri)  
 Match-E-Be-Nash-She-Wish Band of Potawatomi Indians of MI  
 Menominee Indian Tribe of Wisconsin  
 Michigan Association of RC&Ds  
 Michigan Charterboat Association  
 Michigan Conservation Districts  
 Michigan Department of Environmental Quality  
 Michigan Department of Natural Resources  
 Michigan Department of Transportation  
 Michigan Inland Lakes and Stream Association  
 Michigan State University  
 Michigan United Conservation Clubs  
 Mille Lacs Band of Ojibwe  
 Minnesota Department of Natural Resources  
 Mississippi Interstate Cooperative Resource Assoc.  
 Mississippi Valley Conservancy  
 Mississippi Valley Partners  
 Mississippi Walleye Club  
 Missouri Department of Conservation  
 Missouri River Communities Network  
 Missouri River Relief  
 Missouri Smallmouth Alliance  
 Mohican Nation Stockbridge-Munsee Band  
 National Fish and Wildlife Foundation  
 National Park Service  
 Natural Heritage Foundation  
 Natural Resource Conservation Service  
 Nebraska Game & Parks Commission  
 Nature Conservancy  
 New York Depart. of Environmental Conservation  
 North American Native Fishes Association  
 Northland Sportmans Club  
 Nottawaseppi Huron Band of Potawatomi  
 Ohio Department of Natural Resources  
 Ohio Environmental Protection Agency  
 Oneida Tribe of Indians of Wisconsin  
 Ontario Ministry of Natural Resources  
 Ottawa National Wildlife Refuge Association  
 Overton-Woodridge Levee and Drainage Dist.  
 Pennsylvania Depart. of Environmental Protection  
 Pere Marquette Watershed Council  
 Peshawbestown Community Center  
 Pokagon Band of Potawatomi Indians  
 Prairie Island Indian Community  
 Pure Fishing  
 Rainy River First Nation  
 Red Cliff Band of Lake Superior Chippewa Indians  
 Red Lake Band of Chippewa Indians  
 River Alliance of Wisconsin  
 River Relief/Missouri River Relief  
 Sac and Fox Tribe of the Mississippi in Iowa  
 Saginaw Chippewa Indian Tribe of Michigan  
 Sault Ste. Marie Tribe of Chippewa Indians  
 Sea Grant  
 Shakopee Mdewakanton Sioux Community  
 Sierra Club  
 Sakaogon Chippewa (Mole Lake) Community of Wisconsin  
 Soo Area Sportsman's Club  
 South Dakota Department of Game, Fish & Parks  
 Sport Fishing and Boating Partnership Council  
 St. Croix Chippewa Indians of Wisconsin  
 Sturgeon for Tomorrow  
 The Nature Conservancy  
 Thunder Bay Brown Trout Committee  
 Thunder Bay Walleye Club  
 Tip of the Mitt Watershed  
 Trout Unlimited  
 U. S. Army Corps of Engineers  
 U.S. Department of Agriculture  
 U.S. Environmental Protection Agency  
 U. S. Forest Service  
 U. S. Geological Survey  
 Upper Black River Restoration Committee  
 Upper Sioux Community of Minnesota  
 Vernon County Land/Water Conservancy  
 West Fork Sports Club  
 White Earth Band of Chippewa  
 Wisconsin Association of Lakes  
 Wisconsin Department of Natural Resources  
 Wisconsin Hunting and Fishing Alliance

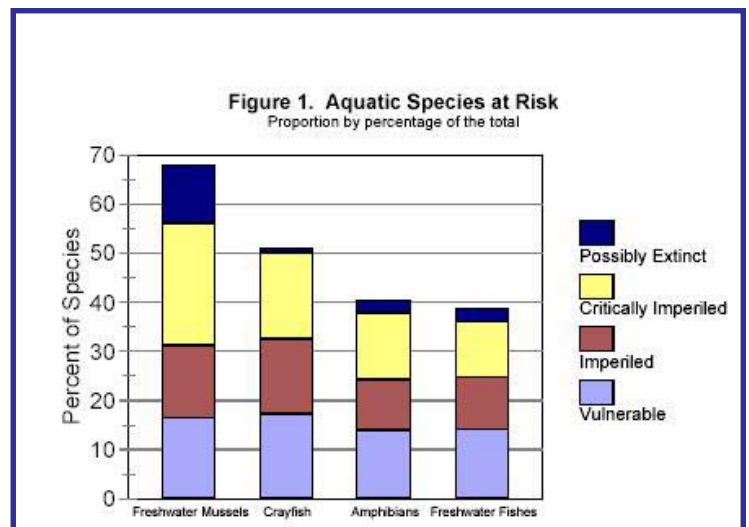
# Our Fisheries and Aquatic Resources are in Trouble!

## Conservation Status of Aquatic Species in Region 3



The need to protect, restore, and enhance aquatic resources has never been greater.

- Since 1900, 123 aquatic freshwater species have become extinct in North America (Ricciardi and Rasmussen 1999).
- Of the 822 native freshwater fish species in the U.S., 39% are at risk of extinction (Stein and Flack 1997).
- Forty-three percent of federally-listed threatened and endangered species rely to some extent on wetland habitats (Sipple).
- Thirty four percent of fish, 65% of crayfish, and 75% of the 297 freshwater mussels in the U.S. are classified as rare or extinct, in comparison to 11-15% of terrestrial vertebrates (Master 1990).
- As of 2004, 227 aquatic species are federally threatened or endangered: 21 amphibians, 115 fish, 70 bivalves, and 21 crustaceans (USFWS 2004).



(Stein and Flack, 1997 Species Report Card)

# Aquatic Species Conservation and Management

## Native Species



-USFWS

**Dr. Craig Paukert, Kansas State Cooperative Fisheries Unit, holds an endangered fingerling pallid sturgeon collected in the Missouri River. The assessment is part of the Pallid Sturgeon Recovery Plan.**

**Our Goal:** Self-sustaining populations of native fish and other aquatic resources that maintain species diversity, provide recreational opportunities for the American public, and meet the needs of Tribal communities.

### (Endangered and Threatened Species)

**Our Objective** Recover fish and other aquatic resource populations protected under the Endangered Species Act (ESA), in collaboration with the Service's Endangered Species Program.

*Our primary focus for this objective is on implementing recovery activities that: 1) prevent the extinction of threatened and endangered species, and; 2) lead to down-listing or de-listing species listed under the ESA. Specifically, we work with pallid sturgeon, Higgins eye pearl mussel, Winged Mapleleaf, Topeka shiner and Niangua darter.*

### Our Commitment

#### - Columbia Fishery Resources Office:

- Serve as the Lower Missouri River Pallid Sturgeon Recovery Work Group Leader and coordinate endangered pallid sturgeon recovery efforts, including management, propagation, and stocking in the Lower Missouri River (IA, KS, MO, NE).

*"...served as the Lower Missouri River Pallid Sturgeon Recovery Work Group Leader; hosted a meeting of the group in January, coordinated recovery efforts by serving as a member of the Recovery Team, monitored 225 miles of the Lower Missouri River resulting in the capture of 39 pallid sturgeon, and worked with Federal hatcheries, Missouri River states, and universities to assess genetics and effects on stocking pallid sturgeon ..."*

- Monitor the status of the pallid sturgeon population and associated fish community in Lower Missouri River (IA, KS, MO, NE)

*"...monitored 225 miles of the Lower Missouri River resulting in the capture of 39 pallid sturgeon and assessed the associated fish community in Lower Missouri River ..."*

- Provide technical assistance to the Niangua Darter Recovery Team to recover darters in the Osage River Basin *"...proposed projects to the Recovery Team in conjunction with the Missouri Department of Conservation and Columbia Ecological Services Field Office; gathered photos, measured structures, and assessed culvert types and stream parameters on low water crossings in the Niangua Darter range; aided the Recovery Team in gathering data for entry into Missouri Department of Conservation's Niangua darter GIS database - efforts will aid the group in prioritizing structure replacement for future years..."*



-USFWS

**Biologists collect mussel larvae (glochidia) by gently holding the shell open with a rubber stopper and rinsing the larvae into a dish.**



-USFWS

**Smallmouth bass serve as host fish for Federally endangered Higgins' eye pearl mussels at the Genoa NFH.**

# Aquatic Species Conservation and Management

## – La Crosse Fishery Resources Office:

- Work with partners to collect, re-distribute and monitor endangered Higgins' eye pearl mussel for recovery efforts in the Upper Mississippi River Basin (IL, IA, MN, WI).  
“...developed successful propagation techniques for Higgins' eye pearl mussels leading to the reintroduction of 250,000 juveniles back into their historic range...”
- Work with partners to collect and aggregate endangered Winged Mapleleaf mussels for recovery efforts in the Upper Mississippi River Basin (MN, WI).  
“...dove with partners to aggregate specimens of the endangered Winged Mapleleaf mussel in the St. Croix River and transported glochidia to the Genoa NFH...”

## – Genoa National Fish Hatchery:

- Work with partners (e.g. Minnesota & Wisconsin DNRs and U.S. Geological Survey) to begin efforts to culture Winged Mapleleaf mussels for stocking under an interagency recovery program in the Upper Mississippi River Basin (MN, WI).  
“...assisted in the collection of gravid endangered winged mapleleaf mussel females for recovery efforts in the Upper Mississippi River basin; developed two disease free captive brood lines of channel catfish to use as host fish; acquired and designed culture systems to mimic river conditions to maximize post release survival of juvenile mussels; built cages and placed 100 host fish over suitable habitat in the St. Croix River system to produce an estimated 25,000 juvenile mussels; received a grant and acquired equipment, host fish, and inoculated 100 channel catfish with an estimated 30,000 winged mapleleaf glochidia - fish are currently being held on station...”
- Culture Higgins' eye pearl mussel for stocking under an interagency recovery program in the Upper Mississippi River Basin (IL, IA, MN, WI). (work supported by **FONS project # 2002-001**)  
“...infested 9,054 host fish of 3 different species to produce 1,976,725 juvenile mussels that were subsequently released into the upper Mississippi River watershed...”
- Culture approximately 10,000 yearling host fish for endangered Higgins' eye pearl mussel recovery efforts (IL, IA, MN, WI).  
“...cultured 10,000 host fish for the Higgins' eye pearl mussel recovery program, but used only 7,700 host fish due to a shortage of mussel brood stock, with excess fish used for tribal/refuge stocking commitments ...”

## – Neosho National Fish Hatchery:

- Culture and tag 5,000 endangered pallid sturgeon (nine inch) for stocking under an interagency (e.g. Missouri Department of Conservation, Iowa DNR, and U.S. Army Corps of Engineers) recovery program in the Missouri River (MO, IA, KS, NE). (**FONS project # 2002-007**)  
“...cultured and tagged 3,634 pallid sturgeon (not enough fish received to produce 5,000; pit and elastomer tagged), and stocked them into the Lower Missouri River at Miami, Missouri...”
- Provide technical assistance to complete the Pallid Sturgeon Propagation Plan for the Missouri River (IA, KS, MO, MT, NE, ND, SD).  
“...provided technical assistance by actively participating in the revision of the Pallid Sturgeon Propagation Plan for the Missouri River...”
- Protect the water source for the threatened Ozark cavefish on a portion of the Ozark Cavefish NWR (MO).  
“...protected the water source for the threatened Ozark cavefish by continuous monitoring of the water quality on a portion of the Ozark Cavefish NWR that is located on the hatchery; continued to maintain a live camera inside the spring box to monitor the cavefish...”

## – La Crosse Fish Health Center:

- Complete two fish health assessments on pallid sturgeon cultured at the Neosho NFH (MO)  
“...completed an assessment on pallid sturgeon cultured at the Neosho NFH...”
- Complete at least one fish health assessment per year at Genoa NFH on host fish used for freshwater mussel culture (WI).  
“...completed one fish health assessment at the Genoa NFH of fish used as mussel hosts...”
- Provide technical assistance on pallid sturgeon fish health for the Region (IA, MO).  
“...participated in several workshops and meetings with Region 6 fish health experts to better assess pallid sturgeon in Region 3...”

# Aquatic Species Conservation and Management

## *(Aquatic Species of Concern)*



-USFWS

Biologists from the Region 3 FRO's provide leadership for interagency collaborative efforts to restore depleted lake sturgeon populations.



-USFWS

A large lake sturgeon is being spawned by crews from Rainy River First Nations, White Earth Indian Reservation, and La Crosse FRO to provide eggs for a restoration program on the White Earth Indian Reservation.



-USFWS

Northland College student volunteer Becca Schoon searches for brook trout fry in Whittlesey Creek near Ashland, Wisconsin. The creek has been stocked with coaster brook trout which live most of their lives in Lake Superior and spawn in tributary streams.

**Our Objective** Restore declining fish and other aquatic resource populations, in collaboration with States, Tribes, partners, and stakeholders.

*Our primary focus for this objective is on restoration activities that will help prevent the need to list species under the ESA. Specifically, we work with lake sturgeon, paddlefish and native mussels in the Mississippi, Missouri and Ohio river basins and lake trout, coaster brook trout, lake sturgeon, and lake herring in the Great Lakes.*

### Our Commitment

#### – Regional Office will:

- Work with partners through the Great Lakes Fish and Wildlife Restoration Act Proposal Review Committee to identify and fund native fish restoration activities addressing recommendations of the Great Lakes Fishery Resources Restoration Study (IL, IN, MI, MN, NY, OH, PA, WI).

“...the following Restoration Act funded projects were in progress from previous funding years or received initial year of funding during FY 2005: Dynamics and biology of siscowet lake trout in Lake Superior- Michigan State University; Use of unmanned submersibles to study lake trout spawning on the Lake Michigan mid-lake reef- University of Wisconsin- Milwaukee; A biophysical model of Lake Erie walleye recruitment: explaining historical recruitment and anticipating consequences of future climate change- Michigan State University; Development of genetic management guidelines for lake sturgeon- University of California-Davis; Analysis of tagging data to quantify lake trout migration in Lake Huron- University of Michigan- Ann Arbor; Lake Huron lake whitefish distribution study- Chippewa Ottawa Resource Authority (CORA); Comparison of techniques for stock discrimination of Lake Erie walleye- Great Lakes Fishery Commission; Otolith microchemistry for percid production in Lake Erie- Great Lakes Fishery Commission; Evaluating current reproductive success of lake trout at the Port of Indiana breakwater- University of Illinois- Urbana-Champaign; Responses of lake trout and Chinook salmon to unprecedented declines in major prey fish abundance in Lake Huron- Michigan State University; Lake sturgeon rehabilitation using stream-side rearing facilities in Manitowoc River, a tributary of Lake Michigan- Wisconsin Department of Natural Resources; Models of lake herring population dynamics in Lake Superior; implications for restoration in the lower Great Lakes- Michigan State University; Lake Erie watersnake recovery plan implementation: Demographic responses to invasive round gobies- Northern Illinois University; Identification of potential pheromones important for lake trout reproduction- Michigan State University...”

## Aquatic Species Conservation and Management

- Work through our position as observer on the Council of Lake Committees to pursue native fish rehabilitation on a Great Lakes wide scale consistent with fish community objectives for each lake (IL, IN, MI, MN, NY, OH, PA, WI).

“...participated in meetings in 2005 which addressed native fish rehabilitation including the propagation of the Klondike Reef (Lake Superior) strain of lake trout for restoration stocking, lake sturgeon restoration actions, and the declining status of American eel populations...”

### – Alpena Fishery Resources Office:

- Work with partners to monitor the status of lake trout and to restore populations and habitat through interagency plans for Lake Huron (MI).

“...continued to provide leadership for lake trout rehabilitation efforts through the Lake Huron Technical Committee (LHTC); conducted mid-lake lake trout spawning surveys, drafted a plan for offshore stocking strategies, and coordinated with National Fish Hatcheries to implement the *Hatchery Product Evaluation* program and discussed techniques to expand production; participated on the Lake Huron Lake Trout Task Group and helped develop a long-range stocking plan to facilitate rehabilitation and comply with the Year 2000 Consent Decree; processed and updated interagency data with 1,000 coded-wire-tags recovered from lake trout fisheries; co-authored a summary of ongoing Lake Huron studies designed to monitor lake trout rehabilitation; presented lake trout movement patterns data to the LHTC; updated lake trout stock assessment models for two units in Lake Huron...”

- Work with partners to monitor the status of lake sturgeon and to restore populations and habitat through interagency plans for Lake Huron, Lake Erie and connecting waters (MI, OH).

“...conducted habitat assessments of the North Channel of the St. Clair River using Side-scan Sonar and direct viewing - 12 miles of the North Channel was surveyed and will be geo-referenced; determined lake sturgeon habitat use of the North Channel from ongoing telemetry that began in 1996; assessment of a 25 ha lake sturgeon spawning reef that was created in the Detroit River in 2004 revealed that at least nine species of fish either spawned on the reef or were captured in spawning condition at the reef; began an assessment in the Saginaw River watershed to determine if lake sturgeon are using the system; continued the partnership with commercial fishers on Lake Huron who tag lake sturgeon incidentally captured in their fishing nets; assumed the lead role on a Great Lakes basin lake sturgeon tagging database that houses all lake sturgeon tagging information ...”

- Work with partners to monitor the status of lake herring and develop interagency recovery plans in Lake Huron (MI).

“...reviewed and provided recommendations for the development of a Draft Lake Herring Recovery plan for Lake Huron; major shifts in Lake Huron food web dynamics have created a window of opportunity for recovery of native pelagic prey species; discussion and planning will continued in FY 2005 for possible reintroduction efforts...”

- Work with partners to identify the status of and develop interagency restoration plans for freshwater mussels in the St. Clair River Delta (MI).

“...initiated dialogue with researchers in Ontario waters of Lake St. Clair on possible complementary efforts in U.S. waters - the St. Clair delta region is known to possess a rich diversity of native mussels and protection of this unique micro-habitat is essential; consultation has been initiated with Regional mussel specialists at the Genoa NFH for future survey work...”

- Work with the Michigan DNR, East Lansing Field Office and others to assess the status of Eastern sand darter (MI).

“conducted beach seining at 10 locations in the Detroit River in FY 2004 in cooperation with U.S. Geological Survey biologists to assist the Michigan DNR with a comprehensive survey of the beach fish community where proposed development may impact listed species such as the Eastern sand darter...”

## Aquatic Species Conservation and Management



-USFWS

This radio-tagged lake sturgeon is part of the St. Louis River lake sturgeon telemetry study in cooperation with the Grand Portage Band of Lake Superior Chippewa and the 1854 Tribal Authority.



-USFWS

Biologist Nate Caswell from the Carterville FRO holds a shovelnose sturgeon. Carterville FRO is working in partnership with the Ohio DNR to reintroduce shovelnose sturgeon to the Upper Ohio River basin.



-USFWS

Fish and Wildlife Service field offices worked with partners to identify host fish for the Federally endangered winged mapleleaf mussel.

### - Ashland Fishery Resources Office:

- Work with partners to monitor the status of brook trout and to restore populations and habitat through interagency plans for Lake Superior (MI, MN, WI).

“...contributed to interagency efforts to evaluate and define genetic characteristics of migratory Lake Superior brook trout; drafted a report on brood stock collections and completed a report on the status of brook trout at Isle Royale National Park; participated in the development and use of Geographic Information Systems capability to support aquatic habitat conservation activities for Lake Superior, with initial focus on the Isle Royale National Park; conducted brook trout population assessments with the DNR’s, tribes, or other Federal agencies throughout the Lake Superior basin; developed a joint rehabilitation plan for Wisconsin waters of Lake Superior with the Wisconsin DNR; implemented a brook trout restoration plan for Whittlesey Creek ...”

- Work with partners to monitor the status of lake sturgeon and to restore populations and habitat through interagency plans for Lake Superior (MI, MN, WI).

“...continued ongoing field initiatives at the current level of support; initiated a population assessment off the Ontonagon River with Keewenaw Bay Indian Community and the Michigan DNR; identified and promoted opportunities for public education and observation of lake sturgeon; grew partnership programs with the Ontario Ministry of Natural Resources, state DNR’s, tribes, and commercial fishers ...”

- Work cooperatively with the Endangered Species program and the U.S. Geological Survey to assess the status of shortjaw cisco in Lake Superior.

“...worked with East Lansing Field Office (ES) and the Green Bay FRO on the status of shortjaw cisco ...”

### - Carterville Fishery Resources Office will:

- Collect 150-200 adult shovelnose sturgeon from the Ohio River (extirpated from portions of Ohio waters) to support Ohio DNR’s reintroduction program (IL, OH).

“...collected sexually mature adult shovelnose sturgeon (25 female and 10 male) from the Ohio River (extirpated from portions of Ohio waters) and transported to Logan Hollow Fish Farm to produce offspring in support of Ohio DNR’s reintroduction program, instead of stocking the 150-200 adult shovelnose sturgeon originally proposed...”

### - Columbia Fishery Resources Office will:

- Collect and provide biological data on lake sturgeon to the Missouri Department of Conservation for stock assessment (MO).



## Aquatic Species Conservation and Management

“...provided biological data by reporting catches of lake sturgeon tagged by the Missouri Department of Conservation (MDC) during basin wide sampling efforts for *Pallid Sturgeon and Associated Fish Community Assessment*; wild or untagged lake sturgeons were tagged with passive integrated transponder (PIT) tags and recapture data was collected from fish with tagging and recapture data forwarded to the MDC coordinator for stock assessment...”

- Collect and provide biological data on paddlefish in the Lower Missouri River to the Mississippi Interstate Cooperative Resource Association Paddlefish/Sturgeon Committee for stock assessments (MO).

“...served as the database manager for the Mississippi Interstate Cooperative Resource Association Paddlefish/Sturgeon Committee working with the 22 states on the committee to update the database and modify it to better provide paddlefish tagging information back to the state agencies; modifications made to this database will allow the Fish and Wildlife Service to aid the states in developing paddlefish management plans...”

- Provide technical assistance to Missouri Department of Conservation to help re-write a 10-year paddlefish management plan (MO).

“...provided technical assistance to the Missouri Department of Conservation to help re-write a 10 year paddlefish management plan...”

- Provide technical assistance to help write a comprehensive, multi-state paddlefish plan for the Lower Missouri River (SD, NE, KS, IA, MO).

“...provided technical assistance on writing a comprehensive multi-state paddlefish plan for the Lower Missouri River ...”

### – Green Bay Fishery Resources Office

- Work with partners to monitor the status of lake trout in Lake Michigan, revise the lake trout rehabilitation plan and restore populations and habitat through coordinated interagency actions (MI, IL, IN, WI).

“...completed gill-net assessments on two Western Lake Michigan reefs in 2004 and at six sites in 2005 in northern and western Lake Michigan with objectives to determine relative abundance of lake trout by year-class, sex and strain, and to evaluate lake trout reproductive potential at reefs that have historically been stocked by the Fish and Wildlife Service - data obtained in these assessments indicate that lake trout are not reproducing naturally, and that densities and age structure should be increased; led on activities relating to the interagency Lake Trout Task Group; established a coordinated interagency, relational database for all spring gill net assessment data, the first analysis of such data; developing a lake trout restoration status report for the State of the Lake 2005 publication by the Great Lakes Fishery Commission; preparing two manuscripts for publication based on research partnerships with state and tribes on lake trout restoration strategies ...”

- Work with partners to monitor the status of lake sturgeon in Lake Michigan, develop a rehabilitation plan and restore populations and habitat through coordinated interagency actions (MI, IL, IN, WI).

“...provided leadership in a multi-partner initiative to provide the first system-wide status assessment of remnant lake sturgeon stocks in Lake Michigan - objectives are to determine the status, health, and reproductive success of remnant sturgeon stocks throughout the lake in order to prioritize rehabilitation efforts - spawning runs and hatching success are being surveyed and fish sampled and tagged to provide genetic material for stock differentiation, stock structure, and mark-recapture data - samples and data are also being collected from mixed stocks in the open waters of Lake Michigan to produce measures of population status and trends ...”

- Work with partners to identify the status of spotted musky and develop and implement interagency rehabilitation plans for Green Bay (MI, WI).

## Aquatic Species Conservation and Management



-USFWS

Eggs are gently removed from a coaster brook trout at the Iron River NFH. Biologists at the hatchery will hatch the eggs for restoration programs in Lake Superior.



-USFWS

Iron River and Sullivan Creek NFH's serve as lake trout brood stock stations and produce millions of eggs for rehabilitation programs in the Great Lakes.



-USFWS

Biologist Crystal Anderson spawns a lake trout at the Sullivan Creek NFH. Lake trout from Fish and Wildlife Service hatcheries are used for rehabilitation programs in the Great Lakes.

“...worked with the Wisconsin DNR to identify potential wild spotted musky populations available as a donor stock that gametes could be collected from for transfer to the waters of Green Bay; Ontario Ministry of Natural Resources led the sampling of Great Lakes strain muskies from Lake Huron to provide disease samples to the La Crosse FHC for disease testing - of the 41 fish sampled from Lake Huron, one tested positive for piscirickettsial-like-organism – the 15 muskies sampled from the Fox River, Wisconsin, tested clean - information collected by this project will provide the disease information required to allow for importation of gametes...”

### - Genoa National Fish Hatchery will:

- Work with partners (e.g. Minnesota and Wisconsin DNRs) to identify the host fish for various imperiled mussel species in the Upper Mississippi River Basin (IL, IA, MN, WI). (FONS project # 2002-001)

“...conducted host fish studies to determine suitable fish hosts for the sheepsnose, yellow sandshell, and purple wartyback mussel species as a necessary component and a precursor to a successful restoration program, ...”

- Culture 1,000 lake trout in the isolation unit for future brood stock at Sullivan's Creek NFH under interagency restoration programs for the Great Lakes (MI, WI).

“...held one strain of lake trout until disease clearance was issued in the spring of 2005 and then transferred the fish to Sullivan Creek NFH ...”

- Culture 25,000 lake sturgeon (3 strains) for stocking under interagency restoration programs on the Menominee Indian Reservation (e.g. Menominee Indian Tribe and Wisconsin DNR), Red River of the North Basin (e.g. First Nations of Canada, White Earth Band of Chippewa, and Minnesota DNR), and the Missouri River Basin (e.g. Missouri Department of Conservation) (MN, MO, WI). (FONS project # 2003-001)

“...cultured over 41,000 lake sturgeon totaling 1,250 pounds for the following three watersheds: 1,500 yearlings for the Menominee Indian Reservation, 25,000 8 inch fall fingerlings for the Red River of the North basin, and 15,000 for the Mississippi River Basin ...”

- Culture 7,500 yearling brook trout and 20,000 fingerling brook trout for stocking under an interagency restoration program in Lake Superior (MI, MN, WI).

“...cultured and stocked 7,500 9 inch yearling coaster brook trout in the Hurricane River, Michigan, and 20,000 spring fingerlings and 3,016 spring yearlings in waters of the Grand Portage Indian Reservation, Minnesota...”

- Work with partners to collect and isolate future lake trout brood stock from wild Lake Superior, Seneca Lake and Cayuga Lake donor populations (MI, NY, WI).

“...assisted in the collection of wild coaster brook trout eggs on Isle Royale with the progeny being held in isolation to await disease clearance...”

# Aquatic Species Conservation and Management

## – Iron River National Fish Hatchery will:

- Work cooperatively with the Keweenaw Bay Indian Community and other partners to collect and isolate future lake trout and brook trout brood stock from wild Lake Superior donor populations (MI, WI). (FONS project # 2001-001)
  - “...worked cooperatively with the Keweenaw Bay Indian Community and other partners to collect and isolate future lake trout and brook trout strains from wild populations ...”
- Maintain strains of lake trout (Apostle Island, Green Lake, Traverse Island, and Isle Royale) and brook trout (Siskowit Bay and Tobin Harbor) brood stock, as defined by restoration plans for lakes Superior, Huron, and Michigan, to support interagency restoration programs in the upper Great Lakes (MI, MN, IL, IN, WI).
  - “...currently maintain five strains of lake trout and two strains of coaster brook trout (Siskowit Bay and Tobin Harbor) brood stock, as defined by restoration plans for lakes Superior, Huron, and Michigan, to support interagency restoration programs in the Upper Great Lakes ...”
- Produce lake trout (3-5 million eggs; 1.2 million yearlings) and brook trout (3-500,000 eggs; 50,000 fry; 50,000 fingerlings; 50 adults) for stocking under interagency restoration programs in Lake Superior, Lake Huron, and Lake Michigan (MI, MN, IL, IN, WI).
  - “...produced 5,700,000 green lake trout eggs, and 875,000 green brook trout eggs which met or exceeded all of our requests. 1.164 million yearling lake trout were stocked into the Upper Great Lakes. A total of 168,044 fry, fingerling, and adult brook trout were stocked to meet all commitments for stocking under interagency restoration plans in lakes Superior, Huron, and Michigan ...”
- Work with partners through the Lake Michigan Technical Committee and the Lake Huron Technical Committee to update and implement interagency lake trout restoration plans (MI, IL, IN, WI).
  - “...continued to work with partners through the Lake Superior Technical Committee, Lake Michigan Technical Committee and the Lake Huron Technical Committee to update and implement interagency lake trout restoration plans ...”

## – Jordan River National Fish Hatchery will:

- Produce 1.8 million lake trout yearlings for stocking under interagency restoration programs in Lake Huron and Lake Michigan (MI, IL, IN, WI).
  - “...produced 2.15 million lake trout yearlings of four strains for stocking under interagency rehabilitation programs in lakes Huron and Michigan - approximately 162,000 were coded-wire tagged for a Lake Huron study with the balance fin clipped to identify them as hatchery reared; The additional 351,000 fish were raised in support of the 2000 Consent Decree, which required additional fish production from the lake trout hatcheries ...”
- Operate the M/V Togue to stock 3 million lake trout yearlings from Iron River, Pendills Creek and Jordan River NFHs at offshore reefs in Lake Michigan and Lake Huron (MI, IL, IN, WI).
  - “...delivered 3,266,363 fish with the M/V Togue from all three lake trout hatcheries this distribution season, despite its advanced age and need for retirement...”
- Provide 600,000-900,000 lake trout fry to Pendills Creek NFH for rearing to yearling stage (MI, IL, IN, WI).
  - “...transferred 800,000 lake trout fry to Pendills Creek NFH for rearing to yearling stage...”
- Work with partners through the Lake Michigan Technical Committee and the Lake Huron Technical Committee to update and implement interagency lake trout restoration plans (MI, IL, IN, WI).
  - “...participated on the Lake Huron and Lake Michigan Technical Committees and Lake Trout Task Groups to update and implement interagency lake trout restoration plans with our partners; elected one of the staff as the new Lake Trout Task Force group leader for the Lake Huron Technical Committee...”

## – Neosho National Fish Hatchery will:

- Hold 100 freshwater drum as host fish for Southwest Missouri State University’s efforts to culture the Neosho Mucket, a candidate species for listing under the *ESA* (MO).

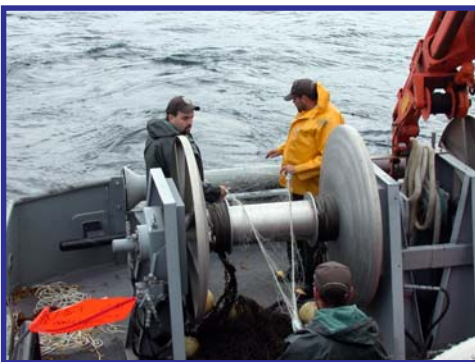
## Aquatic Species Conservation and Management



-USFWS  
The Sullivan Creek NFH maintains the Klondike strain of lake trout to provide offspring for rehabilitation programs in Lake Erie.



-USFWS  
John Whitney takes samples from northern pike from the Mississippi River as part of the Wild Fish Health Survey while Jan Beitlich records length/weight data



-USFWS by Aaron Woldt  
Alpena FRO Fishery Biologists Aaron Woldt, Scott Koproski, and Adam Kowalski set gillnets to capture lake trout from Lake Huron during the mid-lake lake trout survey in October 2004.

“...continued to hold and care for 100 freshwater drum as host fish for the Southwest Missouri State University’s efforts to culture the Neosho mucket, a candidate species for listing under the Endangered Species Act...”

- Experiment with culturing freshwater drum to provide a continuous supply for Neosho mucket culturing efforts (MO). “...continued to experiment with the culturing of freshwater drum in a pond environment, in an effort to provide a continuous supply of small drum for the mussel work being done in the Ozarks which is a cooperative effort with the Columbia Ecological Services Office and Southwest Missouri State University...”

### – Pendills Creek National Fish Hatchery will:

- Produce 750,000 lake trout yearlings for stocking under interagency restoration programs in Lake Huron and Lake Michigan (IL, IN, MI, WI). “produced and stocked 803,623 lake trout weighing 42,079 pounds into Lake Michigan which represents an increase over the required lake trout yearlings of 750,000 fish...”
- Work with partners through the Lake Michigan Technical Committee and the Lake Huron Technical Committee to update and implement interagency lake trout restoration plans (MI, IL, IN, WI). “...participated in technical committee meetings for both lakes and assisted where possible with technical expertise on lake trout production, brood stock, and distribution issues...”

### – Sullivan Creek National Fish Hatchery will:

- Work with partners to collect and isolate future lake trout brood stock from wild Lake Superior, Lake Huron, Seneca Lake and Cayuga Lake donor populations (MI, NY, WI). “...involved with all future brood stock issues and future brood stock collection issues including the Parry Sound brood stock strain...”
- Maintain strains of lake trout brood stock, as defined by restoration plans to provide eggs for interagency restoration programs in lakes Huron and Michigan (MI, IL, IN, WI). “...produced over 2.451million eyed eggs, helping fulfill interagency restoration program egg requests for lakes Huron and Michigan...”
- Maintain Lake Superior Klondike strain lake trout brood stock and provide 200,000 eggs to Allegheny NFH for rearing to the yearling stage and stocking under interagency restoration programs in Lake Erie (MI, NY). “maintained the Lake Superior Klondike strain of brood stock and provided more than 213,000 eyed eggs to Allegheny NFH for rearing and stocking under interagency rehabilitation programs in Lake Erie...”

# Aquatic Species Conservation and Management

## – La Crosse Fish Health Center will:

- Conduct fish health pathogen screening and diagnostic services for the Service's Great Lakes brook trout and lake trout restoration stocking activities (MI, WI).  
 "...completed two inspections for each Fish and Wildlife Service facility in Region 3..."
- Increase the number of watersheds with current wild fish health surveys to 36 out of 363 watersheds in Region 3 (IL, IN, IA, MI, MN, MO, OH, WI). (**FY05 Department of the Interior Performance Measure**)  
 "...increased the number of watersheds for wild fish health surveys to over 50 out of the 363 watersheds in Region 3..."  
*(Self-sustaining Species)*

**Our Objective** Maintain diverse, self-sustaining fish and other aquatic resource populations in collaboration with Tribes, States, partners, and other stakeholders.

*Our primary focus for this objective is on management activities that help maintain species at self-sustaining levels. Specifically, we work with lake whitefish, walleye, and shovelnose sturgeon.*

## Our Commitment

### – Regional Office will:

- Work through the Council of Lake Committees of the Great Lakes Fishery Commission to conserve native fish and fisheries consistent with the Joint Strategic Plan for Management of Great Lakes Fisheries (IL, IN, MI, MN, NY, OH, PA, WI).  
 "...worked closely through the Council of Lake Committees to propose a new basin-wide fish marking program aimed at improving the management of lake trout and pacific salmon fisheries; as part of the "Mass Marking Demonstration" task group, new technologies available for coded-wire tagging and fin clipping of hatchery propagated fish were successfully demonstrated at the Iron River NFH, Wisconsin, in August, 2004..."

### – Alpena Fishery Resources Office will:

- Conduct fishery-independent assessments to monitor the status of lake whitefish populations in the 1836 Treaty waters of Lake Huron (MI).  
 "...completed fishery independent whitefish surveys at 24 sites in Lake Huron and conducted 12 experimental net sets to determine if these gears fish more efficiently; tagged and released 1,481 lake whitefish in three commercial trap net sets as part of a Great Lakes Fish and Wildlife Restoration Act funded lakewide tagging study to help determine the distribution and stock structure of Lake Huron lake whitefish; served as database manager for the lakewide lake whitefish tagging database..."
- Work with Chippewa Ottawa Resource Authority, Michigan DNR, Ontario Ministry of Natural Resources, Bruce Power, and the First Nations to conduct a lake-wide lake whitefish tagging study to determine stock delineation in Northern Lake Huron (MI).  
 "...tagged and released 1,481 lake whitefish in three commercial trap net sets as part of a Great Lakes Fish and Wildlife Restoration Act funded lakewide tagging study to help determine the distribution and stock structure of Lake Huron lake whitefish..."
- Work with the Michigan DNR, Chippewa Ottawa Resource Authority and the five 1836 Treaty Tribes to identify, assess and reduce threats to lake whitefish, walleye and other stocks targeted by fisheries in the 1836 Treaty waters of Lake Huron (MI).  
 "...worked with cooperators to identify, assess, and reduce threats to lake whitefish; the invasion by zebra mussels has caused a dramatic change in the lower trophic food web that has resulted in reduced growth rates and fitness of lake whitefish stocks in the Great Lakes; lake whitefish are the principal species targeted by tribal commercial fishers in 1836 Treaty waters of Lake Huron..."

## Aquatic Species Conservation and Management



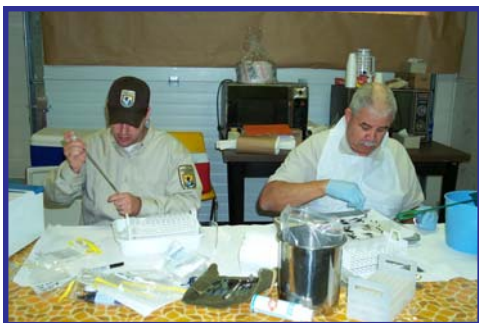
-USFWS

**Nate Caswell, Carterville FRO, holds a shovelnose sturgeon collected during a fishery assessment, looking at the population in the Middle Mississippi and Lower Ohio Rivers. Commercial fishermen are increasingly targeting shovelnose sturgeon as a source of caviar.**



-USFWS

**OMB Examiner Mike Hickey holds a paddlefish captured during a fishery assessment in the upper Missouri River.**



-USFWS

**The La Crosse FHC conducts a fish health pathogen screening at one of the Region's Great Lakes fish hatcheries.**

### - Ashland Fishery Resources Office will:

- Work with the Michigan DNR, Chippewa Ottawa Resource Authority and the five 1836 Treaty Tribes to identify, assess and reduce threats to lake whitefish, lake trout, wall-eye and other stocks targeted by fisheries in the 1836 Treaty waters of Lake Superior (MI).

“...established monitoring/assessment stations for lake whitefish, and conducted a full-year's work cycle (three weeks field work/year); communicated accomplishments; assisted the Michigan DNR, Chippewa Ottawa Resource Authority, and tribal parties to the Consent Decree in managing inter-jurisdictional fisheries in the 1836 Treaty waters of Lake Superior through the Technical Fisheries Committee; aged approximately 750 lake whitefish and 1,000 lake trout scales; established field and vessel capability to conduct near shore fishery monitoring/assessments...”

- Work with partners to monitor the status of and identify potential threats to lake trout populations in Lake Superior (MI, MN, WI).

“...assisted the Michigan DNR Marquette Fisheries Station with the entry of lake trout data from spring assessment fishing conducted in Lake Superior...”

- Conduct fishery-independent assessments to monitor the status of lake whitefish populations in the 1836 Treaty waters of Lake Superior (MI).

“...conducted lake trout and lake whitefish surveys to determine harvest options in 1836 Treaty waters of Eastern Lake Superior; under the 1836 Treaty Fishery Assistance Program, approximately 800 lake whitefish scale samples were aged and entered into a fisheries database...”

- Work with the Wisconsin DNR and the Great Lakes Indian Fish and Wildlife Commission to monitor the status of and identify threats to walleye populations targeted by fisheries in the 1837 and 1842 Treaty waters (WI).

“...provided 10 staff weeks of assistance to the Great Lakes Indian Fish and Wildlife Commission and the Wisconsin DNR to conduct walleye assessments on 35 Ceded Territory lakes...”

### - Columbia Fishery Resources Office will:

- Collect and provide biological data on shovelnose sturgeon to the Missouri Department of Conservation for stock assessment (MO).

“...developed and tested new trawl types required to evaluate sturgeon and benthic fishes in the Missouri River using ever-evolving technology and enlisting the expertise of professional trawl manufacturers to achieve the best fit for the specific environmental conditions found in the Missouri River...”

# Aquatic Species Conservation and Management

## – Green Bay Fishery Resources Office will:

- Conduct fishery-independent assessments and monitor the status of lake whitefish populations in northern Lake Michigan (MI, WI).  
“...set over eight miles of graded mesh gill-net as part of a multi-agency effort to monitor trends in lake whitefish to determine relative abundances and characterize biological attributes of lake whitefish populations...”
- Work cooperatively with the Wisconsin DNR to assess the status of yellow perch populations in Green Bay, Lake Michigan, using models and data analysis (WI).  
“...provided data analysis and a population model to Wisconsin DNR to assist with harvest management and recovery of yellow perch in Green Bay, Wisconsin...”
- Work with the Michigan DNR, Chippewa Ottawa Resource Authority and the five 1836 Treaty Tribes to identify, assess and reduce threats to lake whitefish, walleye and other stocks targeted in fisheries of the 1836 Treaty waters of Lake Michigan (MI).  
“...assisted with the calculation of safe harvest limits for whitefish in the treaty waters and provided input for fisheries monitoring plans for walleye through participation in the Modeling Sub Committee...”

## – La Crosse Fishery Resources Office will:

- Support the La Crosse FHC to conduct the annual Wild Fish Health Survey (MN, WI).  
“...collected specimens for the La Crosse FHC with staff and volunteers in Pools 3, 4, and 7 of the Upper Mississippi River and the Upper Illinois Waterway...”

## – La Crosse Fish Health Center will:

- Conduct the Wild Fish Health Survey (IL, IN, IA, MI, MN, MO, OH, WI).  
“...wild fish health surveys have been conducted in seven regional states...”
- Investigate disease outbreaks for wild and hatchery raised fish (IL, IN, IA, MI, MN, MO, OH, WI).  
“... investigated 10 cases with fish health biologists making recommendations on how to control the spread of disease through fish culture management, nutrition, or chemotherapeutants...”
- Conduct pathogen screening for wild fish brought onto the Service’s NFHs (MI, MO, WI).  
“...completed all assignments for screening fish transferring to Fish and Wildlife Service facilities...”
- Verify findings from other agencies’ fish pathologists (IL, IN, IA, MI, MN, MO, OH, WI).  
“received no requests to verify findings from other agencies...”

## *Interjurisdictional Species*

**Our Goal:** Interjurisdictional fish populations are managed at self-sustaining levels.

*Our primary focus is on supporting, facilitating and/or leading collaborative approaches to conserve and restore sustainable interjurisdictional fish populations.*

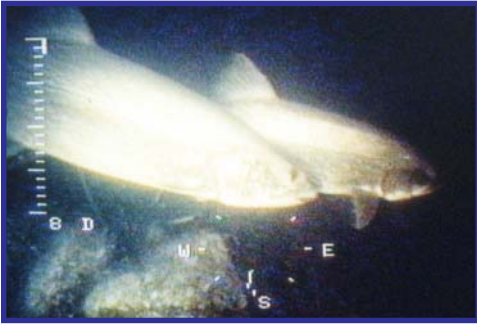
**Our Objective** Support, facilitate, and/or lead collaborative approaches to manage interjurisdictional fisheries.

### **Our Commitment**

#### – Regional Office will:

- Work with partners through the Great Lakes Fish and Wildlife Restoration Act Proposal Review Committee to identify and fund activities supporting collaborative approaches to managing interjurisdictional fisheries (IL, IN, MI, MN, NY, OH, PA, WI).  
“...the following Restoration Act funded projects were in progress from previous funding years or received initial year of funding during FY 2005: Development of genetic management guidelines for lake sturgeon- University of California-Davis; Food habits of Lake Ontario offshore

# Aquatic Species Conservation and Management



-USGS photo by Greg Kennedy

This image shows two lake trout on spawning reef habitat at the Tawas artificial reef in Lake Huron which is in approximately 12-15 feet of water.



-USFWS photo by Scott Koproski

Alpena FRO staff Susan Wells, Aaron Woldt, and Jim Presau tag lake whitefish captured from Northern Lake Huron in November in the first of a three year lake whitefish movement and distribution study funded by the Great Lakes Fish and Wildlife Restoration Act.



-USFWS

Greg Conover from the Carterville FRO holds a paddlefish collected during a fisheries assessment in Pool 26 of the Mississippi River. The effort is part of a larger basin effort involving 23 states to understand paddlefish migration and basin-wide stocking.

prey fish: a reassessment of the magnitude and dynamics of planktivory- Great Lakes Fishery Commission; Assessment of pit tags for estimating exploitation of walleyes in Lake Erie and Saginaw Bay- Ohio Department of Natural Resources; Analysis of tagging data to quantify lake trout migration in Lake Huron- University of Michigan- Ann Arbor; Potential impact of steel-hulled barges on movement of fish across an electric barrier to prevent the entry of invasive carp into Lake Michigan- University of Illinois; Lake Huron lake whitefish distribution study- Chippewa / Ottawa Resources Authority (CORA); Comparison of techniques for stock discrimination of Lake Erie walleye- Great Lakes Fishery Commission; Models of lake herring population dynamics in Lake Superior: implications for restoration in the lower Great Lakes- Michigan State University..."

- Work through the Council of Lake Committees to pursue collaborative approaches to managing interjurisdictional fisheries (IL, IN, MI, MN, NY, OH, PA, WI).

"...worked with the Council of Lake Committees to pursue collaborative approaches to managing interjurisdictional fisheries..."

## - Alpena Fishery Resources Office will:

- Participate through the Lake Huron Technical Committee to conserve, restore and manage interjurisdictional fish stocks in Lake Huron (MI).

"...chaired four meetings of the Technical Fisheries Committee (TFC), chaired two meetings of the Modeling Subcommittee (MSC), and assisted the MSC in developing harvest limits for lake trout and lake whitefish in 1836 Treaty waters of lakes Huron, Michigan, and Superior..."

- Assist Michigan, Chippewa Ottawa Resource Authority and tribal parties to the Consent Decree in managing interjurisdictional fisheries in the 1836 Treaty waters of Lake Huron through the Technical Fisheries Committee, Modeling Subcommittee and Executive Council (MI).

"...chaired four meetings of the Technical Fisheries Committee (TFC), chaired two meetings of the Modeling Subcommittee (MSC), and assisted the MSC in developing harvest limits for lake trout and lake whitefish in 1836 Treaty waters of lakes Huron, Michigan, and Superior; served as primary modeler for one lake trout and one whitefish management unit and as secondary modeler for an additional lake trout unit; helped build a simulation tool for the Executive Council members to interpret results and assess impacts of future harvest regulations; served as primary author of three sections of the 2004 MSC *Summary Status Report*, co-edited the 2004 MSC *Stock Status Report*, and co-authored an MSC sponsored modeling rotation proposal for lake trout units..."



## Aquatic Species Conservation and Management

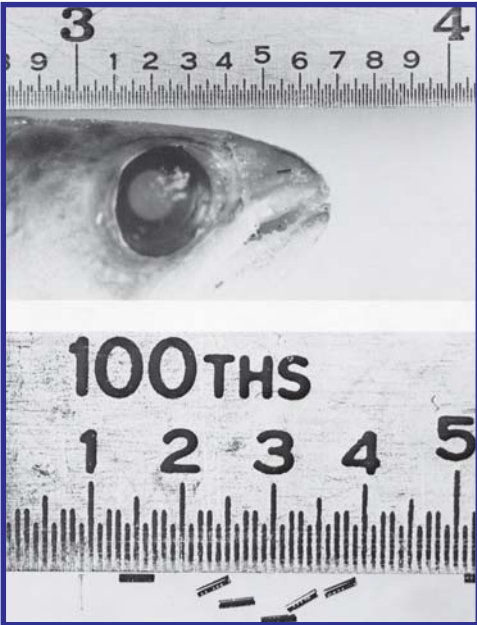
- Provide data input to U.S. Geological Survey for the Lake Huron coded-wire tag database for use in managing interjurisdictional fisheries in Lake Huron (MI).  
“...processed coded-wire tags (CWT) from 1,000 lake trout and provided the data for consolidation in the lake wide database; used the data to provide a report to the Lake Huron Committee by updating the committee on CWT studies being conducted for evaluating progress in lake trout rehabilitation - biologists from the Alpena FRO are co-authors on this annual report...”
- **Ashland Fishery Resources Office will:**
  - Participate through the Lake Superior Technical Committee to conserve, restore, and manage interjurisdictional fish stocks in Lake Superior (MI, MN, WI).  
“...served as a member of the Lake Superior Technical Committee and participated in three annual meetings to contribute to Lake Superior fishery management activities; served as chair of the Lake Sturgeon Work Group of the Technical Committee which involves organization of meetings and reporting of agenda items; participated in the deepwater cisco identification workshop; updated Lake Superior research priorities; helped develop lakewide assessment protocols and summarize the status of the fish community...”
  - Assist Michigan, Chippewa Ottawa Resource Authority, and tribal parties to the Consent Decree in managing interjurisdictional fisheries in the 1836 Treaty waters of Lake Superior through the Technical Fisheries Committee (MI).  
“...conducted lake whitefish gill net assessments in Eastern Lake Superior in cooperation with Bay Mills Indian Community and Chippewa Ottawa Resource Authority where biological data was collected from all commercially desirable species caught; processed diet data from stomach contents and age data from surveyed fish; aged approximately 800 whitefish and 800 lake trout that were collected during assessment activities; provided data to the Modeling Subcommittee of the Technical Fisheries Committee for analysis and development of recommendations...”
  - Assist Michigan, Minnesota, Wisconsin, Great Lakes Indian Fish and Wildlife Commission, and member tribes in managing interjurisdictional fisheries in the 1837 and 1842 Treaty ceded waters (MI, MN, WI).  
“...provided 10 staff weeks of assistance to the Great Lakes Indian Fish and Wildlife Commission and the Wisconsin DNR to conduct walleye assessments on 35 Ceded Territory lakes; participated on the Red Lake Task Force Committee to restore walleye populations in Red Lake; conducted lake trout and lake whitefish surveys to determine harvest options in Eastern Lake Superior...”
- **Carterville Fishery Resources Office will:**
  - Provide fisheries technical assistance to the U.S. Army Corps of Engineers for mitigation planning as part of the Ohio River Main Stem Studies (IL, IN, OH).  
“...participated in Ohio River Main Stem Studies coordination meetings to develop restoration and mitigation plans and technically reviewed numerous reports evaluating the proposed cumulative effects of the expansion project...”
  - Participate in the Mississippi Interstate Cooperative Resource Agency - Paddlefish/Sturgeon Subcommittee to improve and coordinate management activities (IL, IN, IA, MN, MO, OH, WI).  
“...participated in Executive Board and Paddlefish Committee meetings; delivered up-to-date management data to states, developed summary report for 1995-2004, provided project coordination, and transferred coded-wire tag/data processing center and archived data to the Columbia FRO...”
- **Columbia Fishery Resources Office will:**
  - Participate in the Mississippi Interstate Cooperative Resource Agency Paddlefish/Sturgeon Subcommittee to improve and coordinate management activities (IL, IN, IA, MN, MO, OH, WI).  
“...served as an active member of this subcommittee and managed a paddlefish tagging database for the subcommittee; worked to modify the tagging database to allow better distribution of the information to the member states...”

# Aquatic Species Conservation and Management



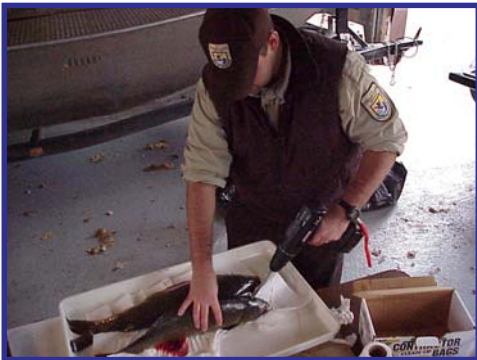
-USFWS

The Fish and Wildlife Service's lake trout stocking vessel, M/V Togue, traveled approximately 2,470 miles in lakes Michigan and Huron stocking approximately 3,266,000 lake trout yearlings in FY2005. It is the second most active vessel in the Great Lakes.



-USFWS

This image is a magnification of a coded-wire tag in the snout of a lake trout. Information gained from tag returns is entered into databases for use by agencies.



-USFWS

Cory Puzach from the La Crosse FHC takes a sample from a carp to test for the Spring Viremia of Carp Virus. The non-native virus was detected in carp located in Wisconsin and Illinois.

## - Green Bay Fishery Resources Office will:

- Participate through the Lake Michigan Technical Committee to conserve, restore and manage interjurisdictional fish stocks in Lake Michigan (IL, IN, MI, WI).

“...served as the Fish and Wildlife Service representative on the Lake Michigan Technical Committee (LMTC) and as technical liaisons to the Committee; chaired two specialized task groups of the LMTC, the Lake Trout Task Group and the Lake Sturgeon Task Group, both of which are developing new restoration plans for these trust native species; participated in the planning and evaluation of lake trout stocking in Lake Michigan...”

- Assist Michigan, Chippewa Ottawa Resource Authority, and tribal parties to the Consent Decree in managing interjurisdictional fisheries in the 1836 Treaty waters of Lake Michigan through the Technical Fisheries Committee, Modeling Subcommittee and the Executive Council (MI).

“...helped determine appropriate harvest levels for each party according to the allocation rules of the decree and biologically based upper harvest limits for management units with tribal and state fisheries for lake trout and whitefish through participation in the Modeling subcommittee; assisted with decisions and reviewed proposals for changes made to fishing locations, walleye stocking sites, and numbers of walleye stocked through the Technical Fisheries Committee...”

- Maintain the following interagency databases: Great Lakes Fish Stocking Database, Lake Michigan Creel Summary, and Lake Michigan Coded-Wire Tag Return Data (IL, IN, MI, MN, NY, OH, PA, WI).

“...updated the inter-agency databases with 2005 data, provided 2004 summary reports for Great Lakes Stocking and Lake Michigan Creel data to the Lake Michigan Lake Committee, and distributed 2005 Lake Michigan lake trout coded-wire tag return data to four state and three tribal agencies...”

## - La Crosse Fish Health Center will:

- Work with States and Tribes to coordinate regional responses and actions to new fish diseases, such as the Spring Viremia of Carp Virus and the Largemouth Bass Virus (IL, IN, IA, MI, MN, MO, OH, WI).

“...collected swim bladders and kidney tissue from over 800 centrachids and temperate basses to screen for the virus - many of the sites sampled have been positive for the virus...”

## Aquatic Invasive Species

**Our Goal: Risks of aquatic nuisance species (ANS) invasions are substantially reduced, and their economic, ecological, and human health impacts are minimized.**

*Our primary focus is on education, preventing new introductions of ANS and working with others to reduce the impacts from Asian carp, zebra mussels, round gobies, sea lamprey, rusty crayfish, Eurasian water milfoil, spiny water fleas, and Eurasian ruffe.*

**Our Objective** Work with other Service programs, States, Tribes, partners, and other stakeholders to reduce the risk of new ANS introductions.

### Our Commitment

#### – Regional Office will:

- Work with partners through the Great Lakes Fish and Wildlife Restoration Act Proposal Review Committee to identify and fund activities reducing the risk of aquatic nuisance species introductions (IL, IN, MI, MN, NY, OH, PA, WI, and Ontario).

“...the following Restoration Act funded projects were in progress from previous funding years or received initial year of funding during FY 2005: Evaluations of pilot-scale venturi oxygen stripping to prevent ballast water invasions- University of Maryland Center for Environmental Science; Potential impact of steel-hulled barges on movement of fish across an electric barrier to prevent the entry of invasive carp into Lake Michigan- University of Illinois; Status of a refuge for native freshwater mussels from impacts of the exotic zebra mussel in the delta area of Lake St. Clair- Great Lakes Fishery Commission; used some FY 2005 funding to work with the Shedd Aquarium and University of Notre Dame to develop and install an exhibit on invasive species which will include an aquarium with live Asian carp and information on about 20 aquatic invasive species in the exhibit reaching an estimated two million people annually...”

- Provide technical assistance to the States of Minnesota and Missouri to assist development of their State ANS Management Plans (MN, MO).

“...provided guidance to Missouri on advancing their draft plan through the approval process, and forwarded the plan to the Aquatic Nuisance Species Task Force for review and comment; worked with members of the Minnesota Plan Steering Committee to plan for a workshop in early FY06 with the objective to edit the template for the draft plan and to develop an implementation table; completed environmental compliance (NEPA and Section 7) for both plans...”



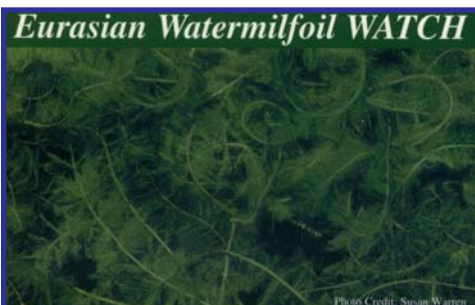
-GLFC

Parasitic sea lampreys are attached to this native lake trout. Each sea lamprey, an invasive species in the Great Lakes, is capable of killing upwards of 40 pounds of lake trout.



-USFWS

This image shows invasive zebra mussels attached to a tagged, native mussel. The zebra mussels attach to hard surfaces including the shells of native mussels and will eventually kill the mussel.



Eurasian watermilfoil is a feathery, submerged invasive aquatic plant that can quickly form thick mats in shallow areas of lakes and rivers. This invasive plant chokes out native plants and affects boating, fishing, and swimming.

## Aquatic Invasive Species



**Zebra Mussel Watch Card**

"Watch Cards" are available for many invasive species. The cards help people identify invasive species and lists contacts if you encounter one.



*-Chris Young - State Journal Register*

**An invasive Asian carp leaps out of the boat wake on the Illinois Waterway.**



*-USFWS*

**Biologists use gill nets to remove invasive Eurasian ruffe adults from Thunder Bay, Lake Huron in hopes of stopping, or at least slowing their spread to new areas.**

- Support all approved State and the St. Croix Interstate ANS Management Plans (IL, IA, MI, MN, OH, WI).  
 "...allocated funding for all plans (except for Ohio which chose not to request funding) during FY 2005; developed modifications to existing Cooperative Agreements and new Cooperative Agreements were sent to cooperators (State and Tribal entities) for their approval..."
  - Support the Great Lakes and Mississippi River Basin ANS Regional Panels (IL, IN, IA, MI, MN, MO, OH, WI, and others within the Basins).  
 "...participated in a meeting of the Great Lakes Panel; AIS coordinator is vice-chair of the Mississippi River Basin Panel and helped plan, convene, and lead one meeting, and lead development of work plans for panel committees..."
  - Provide technical assistance and support for the 100<sup>th</sup> Meridian Initiative, a Traveler Information System, focusing on educating travelers about how they can prevent the spread of aquatic invasive species (MN).  
 "...have installed the Traveler's Information System at the Cabela's store in Owatonna, Minnesota, with the system broadcasting messages to travelers on Interstate 35 and customers - messages focus on how people can prevent the spread of aquatic invasive species (partners in this initiative include Cabel's and the Minnesota Departments of Natural Resources and Transportation)..."
  - Work with the Cabela's store in Owatonna, Minnesota and Minnesota DNR to install a kiosk to help educate the 1 million store visitors about invasive species, their impacts, agencies activities, and what people can do to prevent the spread and minimize impacts (MN).  
 "...nearing completion of the kiosk which will provide information about 25 aquatic invasive species on an interactive display; worked also with the Shedd Aquarium, University of Notre Dame, and U. S. Forest Service to develop and construct an exhibit on aquatic invasive species for the Shedd Aquarium with a completion date set for January or February, 2006..."
- **All Fishery Resources Offices will:**
- Deliver educational programs and materials to the public and news media about the threat of aquatic invasive species and actions the public can take to prevent introduction and range expansion (IL, IN, IA, MI, MN, MO, OH, WI).  
 "...participated in 35 events where the message on aquatic invasive species issues was delivered (Alpena FRO)..."

## Aquatic Invasive Species

“...distributed aquatic invasive species (AIS) “watch cards” to harbor masters and sporting goods stores and motels in the Upper peninsula of Michigan; participated in interviews concerning the threat in Lake Superior from Eurasian ruffe, zebra mussels, and round goby; maintained the station web page that provide current information regarding aquatic invasive species and issues of range expansion (Ashland FRO)...”

“...participated in events for Earth Day, Marion Jr. High, and Tri-C Elementary (~250 students) where information was shared on Asian carp and other aquatic invasive species and on sport fish management; completed and made available station reports and accomplishment reports to a wide audience; assisted in the development of WATCH cards and posters for Asian carp (Carterville FRO)...”

“...provided educational literature describing the threats of aquatic invasive species to the public during office participation in four Missouri River Relief Educational events, two teacher workshops, a field day with the University of Missouri, and at public school events (Columbia FRO)...”

“...worked with local schools and county governments to provide new information, watch cards, and posters about the potential threat of aquatic invasive species (Green Bay FRO)...”

“...provided educational programs and materials to school groups and participated at the Necedah NWR and Genoa NFH with National Fishing Day events, La Crosse Sport Show, Onalaska Fishing Expo, Genoa NFH Open House, and entered a float in the local Sunfish and Catfish Day parades (La Crosse FRO)...”

- Provide technical assistance and information exchange to agencies and researchers investigating potential control and prevention measures for new aquatic invasive species (IL, IN, IA, MI, MN, MO, OH, WI).

“...serves as webmaster for three websites that provides for an information exchange for the general public and for other researchers in the Great Lakes; documentation of new sightings of existing or new invasive species is provided to the U.S. Geological Survey in Gainesville, Florida, which houses a national database (Alpena FRO)...”

“...monitored and reported new aquatic invasive species range expansion discoveries in Lake Superior and the Illinois River to the Great Lakes Fishery Commission, Wisconsin DNR, Michigan DNR, Ontario Ministry of Natural Resources, National Park Service, other FRO’s, universities, and the Ruffe Control Committee of the Aquatic Nuisance Species Task Force (Ashland FRO)...”

“...provided technical assistance and information exchange to agencies and researchers investigating potential control and prevention measures for new aquatic invasive species through formal presentations at natural resource society meetings and through informal communications as Asian Carp Working Group chairman (Carterville FRO)...”

“...assisted the U.S. Geological Survey by recapturing silver carp from the Missouri River tributaries that were carrying telemetry and archival tags - aging structures were collected and measured from these fish for use in an ongoing station ageing study - results of study were presented at annual meeting of the American Fisheries Society (Columbia FRO)...”

“...provided summaries of aquatic invasive species sampling to agencies within the Lake Michigan basin (Green Bay FRO)...”

“...participated in Asian carp management planning with multiple partners; assisted the Ft. McCoy Military installation with Eurasian water milfoil control efforts; worked with the U.S. Geological Survey on their distribution maps and research development (La Crosse FRO)...”

### – Alpena Fishery Resources Office will:

- Conduct surveillance for Eurasian ruffe and other aquatic invasive species in areas of probable invasion in order to detect early presence and initiate control actions in Lake Huron (MI).

“...conducted annual surveillance sampling using trawling, gill nets, and electrofishing units at 19 sites in Lake Huron...”

## Aquatic Invasive Species



-USFWS

**Eurasian Ruffe**

Fisheries offices continually monitor range expansion of invasive Eurasian ruffe in the Great Lakes.



-GLFC

An invasive sea lamprey presses its mouth against the glass of an aquarium. Sea lampreys are parasites and attach to fish and feed off their prey's body fluids. The sharp tooth in the middle is used to rasp a hole into the side of a fish. The sea lamprey program continues to work closely with partners to control populations of sea lampreys in tributaries of the Great Lakes to protect the fishery and related economic activities in the basin (an estimated benefit of \$4-6 billion/year to the region).



-Shedd Aquarium

The invasive round goby has increased its range throughout the Great Lakes. The goby passed through the inter-basin connection to the Illinois River and is moving closer to the Mississippi River.

### - Ashland Fishery Resources Office will:

- Conduct surveillance for Eurasian ruffe and other aquatic invasive species in areas of probable invasion in order to detect early presence and initiate control actions in Lake Superior (MI, MN, WI).

“...conducted three investigative surveys to assess abundance of Eurasian ruffe relative to native fish in four Lake Superior tributaries; conducted an annual assessment of the ruffe population in Thunder Bay harbour, Ontario; conducted two surveys at numerous sites along the south shore of Lake Superior to assess ruffe range expansion; completed the report “*Surveillance for Ruffe in the Great Lakes, 2004*”; documented new aquatic invasive species discoveries documented in Lake Superior: several specimens of threespine stickleback were captured from Pequaming Bay of Keweenaw Bay, Michigan, and one specimen of Eurasian ruffe was captured from Marquette Harbor, Michigan...”

### - Carterville Fishery Resources Office will:

- Inspect and certify shipments of triploid grass carp from private producers to reduce risk of expanding diploid populations in the wild.

“...conducted 11 inspections of Region 3 triploid grass carp producers, certifying more than 14,000 triploid grass carp for 30 shipments to 5 states...”

### - Green Bay Fishery Resources Office will:

- Conduct surveillance for Eurasian ruffe and other aquatic invasive species in areas of probable invasion in order to detect early presence and initiate control actions in Lake Michigan (MI, WI).

“...sampled ports in Lake Michigan that were likely dispersal locations for Eurasian ruffe, based on Great Lakes shipping traffic information supplied by the Great Lakes Carriers Association...”

### - Genoa National Fish Hatchery will:

- Adhere to the station's zebra mussel prevention plan and develop Hazard Analysis and Critical Control Point plans to avoid aquatic invasive species introductions and reduce risks of aquatic invasive species introductions through existing stocking programs (WI). (FY05 only)

“...developed and implemented HACCP (Hazard Analysis Critical Control Point) plans to reduce the threat of spreading aquatic invasive organisms through current hatchery operations, adhered to the existing invasive zebra mussel prevention plan...”

**Our Objective** Work with other programs in the Service, States, Tribes, partners, and other stakeholders to monitor and track the existing range and impacts of ANS and develop programs designed to limit the expansion of those populations.

# Aquatic Invasive Species

## Our Commitment

### – Regional Office will:

- Work through membership on the Sea Lamprey Integration Committee Core Group to provide planning and recommendations guiding the control of sea lamprey to the Great Lakes Fishery Commission (IL, IN, MI, MN, NY, OH, PA, WI).  
“...participated in the Sea Lamprey Integration Committee Core Group meetings resulted in the preparation of detailed sea lamprey control and research program recommendations and accompanying budget for the 2005 field season, which were presented to the Great Lake Fishery Commission at their annual meeting...”
- Work with the Upper Mississippi River Basin States to evaluate the biological and environmental soundness of technological barriers to slow or stop the upstream colonization by bighead and silver carp (IA, IL, MN, WI).  
“...tested effects of technological barriers, designed to contain Asian carp, on lake sturgeon and paddlefish with results showing that these native fish are sensitive to similar sound frequencies, and both species are among the most insensitive fish species to sound - in contrast, bighead and silver carps are much more sensitive to sound, and their sensitivities extend to much higher frequencies than paddlefish and lake sturgeon - these differences in hearing sensitivities demonstrate the possibility of designing a sound barrier for Asian carp that allow passage of paddlefish and lake sturgeon...”
- Work with the City of Chicago, State of Illinois, the U.S. Army Corps of Engineers, and the Metropolitan Water Reclamation District of Greater Chicago to stop Asian carp from establishing self-sustaining populations in the Great Lakes (IL, IN, MI, MN, OH, WI).  
“...continued work on the interagency Chicago Sanitary and Ship Canal (Canal) Dispersal Barrier Advisory Panel and its Rapid Response Team through La Crosse FRO staff, and that panel recommended development of a rapid response plan for Asian carp in the Canal, and efforts to develop the plan were led by the Illinois Department of Natural Resources in partnership with La Crosse FRO and many others; La Crosse FRO worked with an interagency team to conduct assessments to detect the abundance and distribution of Asian carp upstream and downstream of the electrical barrier...”

### – Alpena Fishery Resources Office will:

- Conduct Eurasian ruffe and round goby monitoring activities to determine status, population trends and impacts on native fishes in Lake Huron and the St. Marys River (MI).  
“...conducted population monitoring for ruffe and goby populations at 14 locations in Lake Huron...”
- Conduct round goby surveillance activities to monitor the status and trends of populations at Shiawassee NWR (MI).  
“...worked with Shiawassee NWR staff to conduct a public fishing effort to look for invasive round gobies in refuge waters...”
- Coordinate with state, tribal and Federal partners, the U.S. Coast Guard, the Great Lakes Carriers Association and others to detect and control aquatic nuisance species in Lake Huron and Lake Erie (MI, OH).  
“...directed no additional effort at this task in FY 2005...”

## Aquatic Invasive Species



-USFWS

The threespine stickleback is an aquatic invasive species that has been detected in several locations in Lake Superior.



-USFWS

This invasive Asian carp was captured during a fishery survey in the Lamine River, a tributary to the Missouri River.



-USFWS

Since their introduction to the Great Lakes in 1986 from ship ballast water, invasive zebra mussels have quickly spread and are now found in at least twenty states and two Canadian Provinces.

### - Ashland Fishery Resources Office will:

- Coordinate monitoring and surveillance programs for Eurasian ruffe Great Lakes-wide through position as Chair of the Ruffe Control Committee (IL, IN, MI, MN, NY, OH, PA, WI).

“...conducted three investigative surveys to assess abundance of Eurasian ruffe relative to native fish in four Lake Superior tributaries; conducted an annual assessment of the ruffe population in Thunder Bay harbour, Ontario; conducted two surveys at numerous sites along the south shore of Lake Superior to assess ruffe range expansion; completed the report “*Surveillance for Ruffe in the Great Lakes, 2004*”; documented new aquatic invasive species discoveries documented in Lake Superior: several specimens of threespine stickleback were captured from Pequaming Bay of Keweenaw Bay, Michigan, and one specimen of Eurasian ruffe was captured from Marquette Harbor, Michigan...”

- Conduct Eurasian ruffe and round goby monitoring activities to determine status, population trends and impacts on native fishes in Lake Superior (MI, MN, WI).

“...participated in the 10th annual Goby Roundup/4th annual Carp Corral led by La Crosse FRO with no gobies captured from an assigned 7-mile run of the Illinois River beyond the documented range of goby near Peoria, Illinois...”

- Coordinate with state, tribal and federal partners, the U.S. Coast Guard, the Great Lakes Carriers Association and others to detect and control aquatic nuisance species in Lake Superior (MI, MN, WI).

“...continued work on a project funded through a reimbursable agreement with the National Park Service to identify invasive species within the Great Lakes Network National Park Service Units, and proposed a monitoring program for them - completed literature review and life history narratives for 12 invasive species, analysis of invasion threats, GIS mapping of known locations within Park Units, and suspected range within Midwestern states; identification of other monitoring work and development of a monitoring program is in progress...”

### - Carterville Fishery Resources Office will:

- Lead the development of a National Asian Carp Management and Control Plan (IL, IN, IA, OH, MI, MN, MO, WI).

“...coordinated and participated in the completion of a draft plan that was reviewed by the Asian Carp Working Group; hosted an interagency Working Group meeting to discuss the draft plan and to address comments - will submit a revised draft plan to the Aquatic Nuisance Species Task Force in early FY 2006...”



## Aquatic Invasive Species

- Monitor the presence of Asian carp in the Cache River within the Cypress Creek NWR (near the site where the first black carp was caught in the wild) (IL).
  - “...sampled the Cache River in FY 2004 to look for additional black carp and fortunately, none were found (although numerous juvenile and adult bighead and silver carp were observed near the outlets at the Mississippi and Ohio rivers); sampled sites on Cypress Creek NWR in FY 2004 while the Illinois DNR sampled much of the Cache River as part of their stream monitoring program...”
- Complete a preliminary assessment using traditional and non-traditional sampling gears for capturing Asian carp to develop a standardized sampling protocol as identified by the Asian Carp Work Group (IL, MO).
  - “...conducted limited sampling for Asian carp in the Middle Mississippi River and backwaters using boat electrofishing, seines, gill nets, hoop nets, and experimental gill and trammel nets in FY 2005 (young-of-the-year were efficiently collected but collection of adult fish was variable...”
- **Columbia Fishery Resources Office will:**
  - Complete a preliminary assessment using new sampling gears to begin assessing the population of Asian carp in the Missouri River (MO).
    - “...researched effective net types for collecting Asian carp in FY 2004...”
  - Develop techniques to age Asian carp and improve population estimates in the Missouri River (MO).
    - “...assisted the U.S. Geological Survey in recapturing silver carp from the Missouri River tributaries that were carrying telemetry and archival tags with aging structures collected from these fish for use in an ongoing station aging study - aging structures were measured and assessed and study results were presented at the annual meeting of the American Fisheries Society...”
- **Green Bay Fishery Resources Office will:**
  - Monitor Eurasian ruffe to determine the status and trends of populations in Lake Michigan (MI, WI).
    - “...worked to determine status and expansion of Eurasian ruffe in the Green Bay and northern areas of Lake Michigan with bottom trawl assessments in potential dispersal areas...”
  - Coordinate with state, tribal and Federal partners, the U.S. Coast Guard, the Great Lakes Carriers Association and others to detect and control aquatic nuisance species in Lake Michigan (MI, IL, IN, WI).
    - “...collaborated with natural resource agencies within the Great Lakes basin to implement a rapid response protocol for early detection and possible eradication of new, localized aquatic invasive infestations...”
- **La Crosse Fishery Resources Office will:**
  - Monitor the range expansion of zebra mussels on the St. Croix River and Upper Mississippi River (MN, WI).
    - “...monitored the Lower St. Croix River by participating in three 1-week scuba dives during October, June, and August and installing multi-plate samplers that were monitored biweekly with results indicating that successful reproduction of invasive zebra mussels has occurred on the Lower St. Croix River...”
  - Lead the Service’s effort to coordinate and monitor the range expansion and changes in abundance of round gobies and Asian carp in the Illinois River and Waterway (IL).
    - “...conducted the 10<sup>th</sup> annual Goby Round-Up/Asian Carp Corral in a 200 mile stretch of the Illinois Waterway System from Chicago to Havana with internal and external partners to determine the upstream leading edge of Asian carp and the downstream distribution of round goby with results indicating no downstream expansion of round goby, and no bighead or silver carp were collected any further upstream than where they had previously been collected (21 miles below the electrical barrier and 50 miles from Lake Michigan...”

## Aquatic Invasive Species

- Work with the City of Chicago, State of Illinois, the U.S. Army Corps of Engineers and others to develop a rapid response capability in case Asian carp make it past the electric barrier (IL).

“...participated in meetings of the rapid response team of the Chicago River Dispersal Barrier Advisory Panel and Rapid Response Committee and have a Rapid Response Plan in place...”

- Work with partners to monitor the Asian carp population in the Illinois River and Waterway (IL).

“...worked with the Illinois DNR, Chicago District of the Corps of Engineers, and Metro District to sample monthly for Asian carp in the vicinity of the electrical barrier on the Chicago Ship and Sanitary Canal...”

### – Marquette and Ludington Biological Stations will:

- Plan and conduct sea lamprey assessment and control operations in coordination with the Great Lakes Fishery Commission, Fisheries and Oceans Canada, U.S. Geological Survey and State, Tribal, and university partners (IL, IN, MI, MN, NY, OH, PA, WI, and Ontario).

“...completed lampricide treatment of 54 Great Lakes tributaries and 4 lentic areas, and conducted assessments to detect and determine the extent of sea lamprey infestations in 329 tributaries in coordination with the Great Lakes Fishery Commission, Fisheries and Oceans Canada, U.S. Geological Survey, and State, Tribal, and University partners; operated and maintained 30 existing barriers constructed or modified to block sea lamprey; captured 60,127 adult sea lampreys in 46 United States tributaries and conducted mark-recapture studies to estimate the lakewide abundance of spawning-phase sea lamprey in each Great Lake...”

- Meet the species-specific international treaty obligation to control sea lamprey populations (IL, IN, MI, MN, OH, WI).

**(FY05 Department of the Interior Performance Measure)**

“...continued to apply integrated control methodologies in the St. Marys River in order meet the species-specific international treaty obligation to control sea lamprey populations, and for the fourth year, additional control effort was allocated to Great Lakes where sea lamprey abundance was above lake trout target wounding levels...”



-GLFC  
Greg Baldwin from the Marquette Biological Station explains the importance of biodiversity to students at Bay Cliff Health Camp, Marquette, Michigan.



-GLFC  
Marquette Biological Station employees Mary Wilson and Michael Blohm monitor invasive sea lamprey trap catch.



-GLFC  
The electrical barrier on the Pere Marquette River is energized when adult sea lampreys migrate into this Great Lake tributary to spawn. The series of electrodes can be seen below the water surface.

## Public Use

### Recreational Fishing



-USFWS

Alpena FRO staff talks to the public during the annual Brown Trout Fishing Derby at Alpena, Michigan.

**Our Goal:** Quality opportunities for responsible fishing and other related recreational enjoyment of aquatic resources on Service lands, on Tribal and military lands, and on other waters where the Service has a role.

*Our primary focus is on enhancing recreational fishing opportunities on Service, Tribal, and Department of Defense lands.*

**Our Objective** Work with other Service programs, States, Tribes, partners, and other stakeholders to enhance recreational fishing opportunities on Service, Tribal, and Department of Defense lands.

#### Our Commitment

##### – Alpena Fishery Resources Office will:

- Host National Fishing Day events and organize additional aquatic education and fishing clinics in Michigan (MI).  
“...participated in public aquatic education programs...”
- Assist Shiawassee NWR, Detroit River International Wildlife Refuge and Ottawa NWR in evaluating and managing sport fish populations and providing recreational fishing opportunities (MI, OH).

“...obtained baseline data on the fish community that utilizes the habitat provided by the Michigan Islands National Wildlife Refuge...”

##### – Ashland Fishery Resources Office will:

- Host National Fishing Day events and organize additional aquatic education and fishing clinics in partnership with Whittlesey Creek NWR and Iron River NFH (WI).  
“...assisted staff from the Whittlesey Creek NWR during National Fishing Day; presented interpretive material for a Trout Unlimited event on fish passage issues and provided examples of area projects; presented information to the Apostle Island Sportfishermans Association regarding coaster brook trout in Lake Superior...”
- Assist Whittlesey Creek NWR in evaluating and managing sport fish populations and providing recreational fishing opportunities (WI).

“...conducted assessment surveys to determine the status and relative abundance of wild and stocked populations of coaster brook trout at Whittlesey Creek NWR in support of rehabilitation efforts which included stockings...”



-USFWS

Kids of all ages get their questions answered at the Wild Rivers Chapter of Trout Unlimited expo in Ashland, Wisconsin. Ashland FRO, Iron River NFH, and Whittlesey Creek NWR provided displays and staff for the expo.



-USFWS

Biologists stock adult coaster brook trout into Whittlesey Creek, Wisconsin. Nineteen of the adults contain a surgically implanted radio transmitter. Information from the transmitter will be used to examine migratory behavior and habitat use.

## Public Use



-USFWS  
Illinois DNR, Carterville FRO, along with partners harvest bass fingerlings from a rearing pond for stocking into Crab Orchard Lake.



-Fort Leavenworth Lamp  
Cliff Wilson and Ryan Tilley dip fish from an electrofishing boat during the first fishery survey done by the Columbia FRO at Ft. Leavenworth recreational lakes.



-USFWS  
One of the young anglers gets up close and personal with her fish that she caught during the annual kids fishing day at the Genoa NFH.

### - Carterville Fishery Resources Office will:

- Participate in a National Fishing Day event in partnership with the Crab Orchard NWR (IL).

“...assisted in organizing and hosting the Annual Kid’s Fishing Derby at Crab Orchard NWR (>500 parents and children) by providing a tank of live fish for curious kids and a toddler tank for the youngest kids to “catch” magnetic fish, and conducting an electrofishing demonstration...”

- Assess recreational fisheries and develop management recommendations on:

- Crab Orchard, Illinois River Complex, Big Oaks, Port Louisa, and Two Rivers NWR’s (IL, IN).  
“...assisted the Illinois DNR with annual fishery surveys on three lakes on Crab Orchard NWR and rearing of largemouth bass to enhance the fishery; examining fish response to habitat change for a project on Swan Lake (Two Rivers NWR) as part of a large three year study by studying the age and size structure, recruitment rates, growth rates and relative weights of four species of native fish (bluegill, black crappie, freshwater drum, and white crappie) and Asian carp - completed age and growth analysis for fish collected during 2004 and produced an annual summary report...”
- Scott Air Force Base and Crane Naval Weapons Support Center (IL, IN).  
“...surveyed the fish communities in Cardinal Lake and Scott Lake on Scott Air Force Base to develop management and harvest guidelines to improve recreational fishing and coordinated the evaluation of fish samples for contaminants analyses; provided technical assistance in support of the natural resources management program at Crane Naval Weapons Support Center by conducting fisheries surveys, providing management recommendations, and coordinating fish stockings...”

### - Columbia Fishery Resources Office will:

- Participate in a National Fishing Day event held by a partner (MO).

“...participated in the National Grand Opening of Bass Pro Shops Columbia and served as primary instructors in the 3rd Annual Missouri River Catfish 101 hosted by the Missouri Department of Conservation...”

- Assess recreational fisheries and develop management recommendations on DeSoto NWR (IA).

“...assessed recreational fishery resources on Fort Leavenworth and at DeSoto NWR in coordination with the Iowa DNR and the Nebraska Game and Parks Commission; enhanced recreational fishing opportunities for the public on the Big Muddy NFWR...”

## Public Use

- **Green Bay Fishery Resources Office will:**
  - Host National Fishing Day events and organize additional aquatic education and fishing clinics (WI).  
“...provided aquatic education programs to four local schools at an earth day natural resources program at a local environmental education center, and to a group of county governmental officials...”
  - Assist Seney NWR in evaluating and managing sport fish populations and providing recreational fishing opportunities (MI).  
“...worked cooperatively with Seney NWR to evaluate and sample fish stocks within the Refuge to provide best management practices for recreational fishing...”
- **La Crosse Fishery Resources Office will:**
  - Co-host Fishing Day events at Tomah Veterans Administration Hospital and participate in Fishing Day events at Minnesota Valley NWR, Necedah NWR, Upper Mississippi River NW&FR, and Genoa NFH (MN, WI).  
“...co-hosted Fishing Day events and participated in Fishing Day events at Genoa NFH and Necedah NWR, an Upper Mississippi River NW&FR ice fishing event, and fishing days at the Tomah Veteran’s Administration Hospital in conjunction with our Friends group...”
  - Assess recreational fisheries and develop management recommendations on Horicon, Necedah, and Tamarac NWR’s (MN, WI).  
“...assessed recreational fisheries and provided management recommendations on Horicon NWR and the Fox River satellite; sampled water quality and fisheries at Necedah NWR that was part of the prescribed management action in previous recommendations for the fishery at Harvey’s Pond - made modifications to enhance water inflows to prevent winter kill conditions and fish cribs were placed in the pond to provide more cover for sport fish...”
- **Genoa National Fish Hatchery will:**
  - Co-host Fishing Day events at Tomah Veterans Administration Hospital and the hatchery (MN and WI).  
“...co-hosted fishing events at the hatchery and Tomah Veterans Administration Hospital...”
  - Participate in Fishing Day events at the Upper Mississippi River NW&FR (IA, MN, and WI).  
“...participated in the U.S. Army Corps of Engineers sponsored National Fishing Week event...”
  - Culture 15,000 rainbow trout (8-10 inch) for Fort McCoy and Tomah Veterans Administration Hospital, and Red Lake, Grand Portage, Lac Vieux Desert, and Oneida Indian Reservations (WI, MN).  
“...cultured and stocked 17,700 (10.7 inch) rainbow trout at Fort McCoy generating 126,000 angler hours by 2,500 anglers; also provided fish for Tomah Veterans Administration Hospital and several tribes...”
  - Culture walleye for recreational fishing on Desoto NWR, Upper Mississippi River NW&FR, Crane Naval Base, Fort McCoy, and Iowa Ammunition Plant (IA, IN, MN, WI).  
“...stocked 2,500 advanced fingerling walleyes for DeSoto NWR, 1,264,000 walleye fry for the Upper Mississippi River NW&FR, and 550 advanced fingerling walleyes for Fort McCoy (requests for the Iowa Ammunition Plant and Crane Naval Base were cancelled)...”
  - Culture 100-200,000 bluegills, 200-300,000 northern pike, and 50-400 adult white bass for recreational fishing objectives on Horicon NWR and Upper Mississippi River NW&FR (IA, MN, WI).  
“...cultured and distributed 117,220 bluegill to the Horicon NWR and Upper Mississippi River NW&FR; supplied 1,324,000 northern pike fry to Horicon NWR and Upper Mississippi River NW&FR...”
  - Culture 500 brook trout for recreational fishing objectives at a Wisconsin Boy Scout camp (WI).  
“...Cultured 1,000 rainbow trout to meet recreational fishing objectives at the Decorah Boy Scout Camp...”

## Public Use



-USFWS

Iron River NFH drove their 3,000 gallon fish distribution unit in the Blueberry Festival parade held in Iron River, Wisconsin. They also took this opportunity to advertise their upcoming open house.



-USFWS

Biologist James Anderson speaks to a visitor to the Fish and Wildlife Service booth at Maritime Days held in Sault Ste. Marie, Michigan.

- Culture largemouth bass for recreational fishing objectives on Desoto and Crab Orchard NWRs, Crane Naval Base, and the Iowa Ammunition Plant (IA, IN, WI).

“...cultured and stocked 5,326 largemouth bass for DeSoto NWR and 22,345 largemouth bass for Crab Orchard NWR...”

– **Iron River National Fish Hatchery will:**

- Host National Fishing Day events and organize additional aquatic education and fishing clinics in partnership with Whittlesey Creek NWR and Ashland FRO (WI).

“...hosted a National Fishing Day event and organized additional aquatic education and fishing clinics in partnership with Whittlesey Creek NWR, Ashland FRO, and Northern Great Lakes Visitor Center...”

– **Jordan River National Fish Hatchery will:**

- Host National Fishing Day events and organize additional aquatic education and fishing clinics in partnership with Pendills Creek NFH and Alpena FRO (MI).

“...hosted the educational series “Fish are Fun”, and conducted Fish Anatomy Dissection Classes in two area high schools...”

– **Neosho National Fish Hatchery will:**

- Culture 1,500 rainbow trout (nine-inch) for the Iowa Veterans Administration Hospital (IA).

“...produced 1,291 trout instead of 1,500 for the Iowa Veterans Administration Hospital due to the length being 13 inches in size instead of 9 inches...”

- Culture 5,000 rainbow trout (nine-inch) for Fort Riley (KS).

“...did not produce any rainbow trout for Fort Riley in FY 2005 due to lack of funding on Fort Riley’s part...”

## Water Works Wonders Campaign



-photos courtesy of the Water Works Wonders Campaign

The Fish and Wildlife Service supports the national campaign to increase participation in recreational angling and boating. The Recreational Boating and Fishing Foundation sponsors the Water Works Wonders advertising campaign and highlights National Boating and Fishing Week events.

## Public Use

- Host the Neosho NFH Annual Fishing Clinic/Derby (MO).  
“...hosted an Annual Fishing Clinic/Derby with our Friends group for all the 8-11 year old kids in the area with the event focusing on boating safety, fishing ethics, fish identification, casting, fly fishing, and knot tying with kids being able to put to use what they learned during the morning, to catch fish during the afternoon...”
- **Pendills Creek and Sullivan Creek National Fish Hatcheries will:**
  - Host National Fishing Day events and organize additional aquatic education and fishing clinics in partnership with Seney NWR, Jordan River NFH and Alpena FRO (MI).  
“...co-hosted two fishing day events, one with Seney NWR and the other with the SOO Area Sportsmen’s Club; sponsored an educational booth at the local Sault Ste. Marie Home Show and Maritime Days Show...”
- **La Crosse Fish Health Center will:**
  - Co-host Fishing Day events at Tomah Veterans Administration Hospital.  
“...co-hosted A Fishing Day event at Tomah Veterans Administration Hospital...”
  - Participate in Fishing Day events at the Upper Mississippi River NW&FR and the Genoa NFH (MN, WI).  
“...participated in Fishing Day events at Minnesota Valley NWR, Upper Mississippi River NW&FR, and the Genoa NFH...”

**Our Objective** Provide support to States, Tribes, and other partners to identify and meet shared or complementary recreational fishing and aquatic education and outreach objectives.

### Our Commitment

- **All Field Stations will:**
  - Host station tours and participate in/or organize other public education events for local schools, environmental groups and interested organizations (IL, MI, MO, WI).  
“...participated in 55 outreach events targeting school groups, environmental groups, and interested organizations (Alpena FRO)...”  
“...continued to work with the Northern Great Lakes Visitor Center to enhance educational displays and conduct public education events (Ashland FRO)...”  
“...participated in four education workshops associated with Missouri River Relief which is a multi agency cooperative river cleanup initiative by collecting native fishes from the Missouri River and putting them on display in aerated tanks; conducted a presentation to the Smallmouth Alliance to establish a partnering relationship to springboard fish habitat initiatives; provided instructors for a Missouri River teacher development workshop hosted by the Missouri Department of Conservation, and conducted presentations at three public school venues (Columbia FRO)...”  
“...hosted Fishing Day events at Tomah Veterans Administration Hospital and the hatchery; cultured rainbow trout for recreational fishing at the Decorah Boy Scout Camp; hosted station tours to advance aquatic education and Fish and Wildlife Service programs to local school districts; continued to host off site displays at Outdoor Shows and Conservation Education Events such as Riverfest, La Crosse Nature Club, etc.; installed an interpretive trail at the station with 16 sites of interest; held an open house and lake sturgeon building dedication (Genoa NFH)...”  
“...participated, led, or assisted with Careers on Wheels Day, Natural Resources and Agriculture Unit instruction, and Earth Day Stewardship work day at the Sturgeon Bay Public Elementary Schools (Green Bay FRO)...”

## Public Use



-USFWS

**Marine Engineer Bob Bergstrom explains M/V Togue vessel operations to a group of citizens during the Alpena Lighthouse Festival.**



-USFWS

**Nick Starzl gives a tour to students at the Genoa NFH. Annually, several hundred students visit the hatchery and learn about recreational fishing and native species restoration.**



-GLFC

**A young child is in awe over an adult sea lamprey display provided by the Sea Lamprey Control program.**

“...hosted over 1,700 visitors and a variety of school, college, and community groups; staffed informational booths at a National Fishing Day event held at the Northern Great Lakes Visitor Center; at the Genoa NFH Dedication, and at the Jordan River NFH “Hatchery Fest (Iron River NFH)...”

“...participated in Michigan events for the Bellaire Conservation Club “Kids Fishing Day”, Bass Festival, Grass River Natural Area “Fishing For Facts”, and Math and Science Workshop and, the Iron River NFH Building Dedication in Wisconsin (Jordan River NFH)...”

“...hosted station tours; participated in several sport , boat and travel shows by manning booths and presenting demonstrations and answering questions; expanded educational outreach to schools, colleges, universities, public meetings, and aquaculture conferences about fish health management through workshops, seminars, lectures, posters and pamphlets (La Crosse FHC)...”

“...judged science fairs for various schools in the greater La Crosse area; made presentations at numerous school groups and universities (La Crosse FRO)...”

“...hosted many station tours during the fiscal year and participated in many public education events for local schools, environmental groups, and civic groups; hosted an Annual Fishing Outing for the physically challenged elderly (Neosho NFH)...”

“...accommodated approximately 10,000 visitors at the hatcheries; gave organized tours to 22 school aged children and their teachers, college students, U.S. Forest Service personnel, and family groups; staffed booths and/or attended the 2005 Sault Spring Show, 150th Soo Locks Anniversary Festival, Brimley 4th of July Parade, and Iron River NFH building dedication; provided a tour/picnic site for 30 individuals from the Lake Superior Technical Committee; the Friends of Pendills Creek Hatchery continued it’s development and involvement (Pendills Creek and Sullivan Creek NFH’s)...”

“...conducted or participated in 61 public education events for local schools, environmental groups, and interested organizations involving 134 staff days of effort to provide information on aquatic recreation opportunities and restoration activities of the Fish and Wildlife Service (Marquette and Ludington Biological Stations)...”

### – Alpena Fishery Resources Office will:

- Participate in the Great Lakes Lighthouse Festival and other public events to provide information on aquatic recreation opportunities and restoration activities of the Service (MI).

“...spent 38 staff hours at a station booth during the Great Lakes Lighthouse Festival...”



## Public Use

- **Ashland Fishery Resources Office will:**
  - Work with the Northern Great Lakes Visitor Center partners to enhance educational displays and conduct public education events (WI).  
“...gave presentations at a public and agency gathering to celebrate a new exhibit that depicts a fall scene with spawning brook trout, other native fish and wildlife mounts, flood plain and stream habitats, and a bald eagle nest at the Northern Great Lakes Visitor Center and Whittlesey Creek NWR; serve as chairman on the Board of Directors at the Northern Great Lakes Visitor Center...”
- **Green Bay Fishery Resources Office will:**
  - Work with the Oneida Tribe of Indians of Wisconsin and the Wisconsin DNR to organize and hold an annual youth and elders fishing day (WI).  
“...assisted the Oneida Tribe of Indians of Wisconsin with a 6<sup>th</sup> annual Youth and Elders Fishing Day...”
- **La Crosse Fishery Resources Office will:**
  - Conduct environmental education activities and provide displays for various events, such as Earth Day and River Fest in La Crosse, Wisconsin (WI).  
“...staffed booths at the La Crosse Sport Show, Onalaska Fishing Expo, Genoa NFH Open House, and had a float at Sunfish and Catfish Day parades that reached thousand of people...”
- **Ludington and Marquette Biological Stations will:**
  - Participate in the Great Lakes Lighthouse Festival and other public events to provide information on aquatic recreation opportunities and restoration activities of the Service (MI).  
“...conducted or participated in 26 public education events for local schools, environmental groups, and interested organizations involving 71 staff days of effort to provide information on aquatic recreation opportunities and restoration activities of the Fish and Wildlife Service...”
- **Genoa National Fish Hatchery will:**
  - Collect and/or propagate northern pike (300,000 fry; 30,000 two-inch fingerlings) and walleye (12-20 million eggs; 1-2 million fry; 100,000 two-inch fingerlings; 15,000 six-inch advanced ‘fingerlings’) for other state and tribal resource agencies’ management efforts (AZ, IL, OK, TX, and WI).  
“...collected and distributed 480,000 sauger eggs to the state of Nebraska; collected, cultured, and distributed over 7 million walleye eggs, over 2 million walleye fry and fingerlings for National Wildlife Refuge and Tribal stockings...”
  - Culture 5,000 (six inch) walleye for recreational fishing on Legend Lake, Wisconsin (WI).  
“...this request was actually part of the tribal commitment for the lake listed below in cooperation with Native Americans...”
  - Collect 30-60,000 sauger eggs for the State of Nebraska’s recreational fishing objectives (NE).  
“...supplied the state of Nebraska with 480,000 sauger eggs for their rearing ponds...”
- **Iron River National Fish Hatchery will:**
  - Work with the Northern Great Lakes Visitor Center (U.S. Forest Service) to enhance educational displays and conduct public education and fishing events (WI).  
“...continued to work closely with the Northern Great Lakes Visitor Center (U.S. Forest Service) to enhance educational displays and conduct public education and fishing events; helped develop a Wisconsin DNR stocking permit to allow the use of retired brood fish to be stocked into the ponds at the visitor center...”
  - Work with the Wisconsin DNR to provide surplus brook trout for stocking into public waters to enhance recreational fishing (WI).  
“...developed a plan with the assistance of the Wisconsin DNR to provide surplus brook trout for stocking into public waters to enhance recreational fishing...”

## Public Use



-USFWS photo by Tim Smigielski

**Rick Riley from Northland Sportsman's Club displays turkey hunting items and fields questions at Jordan River NFH's annual Hatchery Fest.**



-USFWS

**Rainbow trout in a raceway at Neosho NFH are crowded together in preparation for distribution to Lake Taneycomo, a popular fishing location.**



-USFWS

**The crew at the Neosho NFH load rainbow trout onto a Missouri Department of Conservation distribution truck for mitigation stocking into Lake Taneycomo.**

### - **Jordan River National Fish Hatchery will:**

- Participate in the Great Lakes Lighthouse Festival, Mancelona Bass Festival, Kalkaska Trout Festival, Traverse City Sports Show, the Northland Hunting and Fishing Expo and other public events to provide information on aquatic recreation opportunities and restoration activities of the Service (MI).

“...participated in the Great Lakes Lighthouse, Festival Mancelona Bass Festival, Traverse City Sports Show, the Northland Hunting and Fishing Expo...”

- Hold an annual Jordan River Hatchery Festival to educate children about natural resources, in coordination with Seney NWR, Alpena FRO and Pendills Creek NFH, Michigan DNR, Michigan Department of Environmental Quality and local non-governmental organizations (MI).

“...held the second annual “Hatchery Festival” in August with many partners and cooperators...”

### - **Neosho National Fish Hatchery will:**

- Host an Annual Open House to educate the public about the hatchery, the Service and the natural resources of Missouri (MO).

“...hosted an annual Open House to express appreciation to the public with thousands of people attending and many partnerships cultivated with the Friends group, Missouri Department of Conservation, City of Neosho, Rotary Club, MAKO Fly Fishers, Recycling Center, Shawnee Tribe, McDonalds Restaurant, Lions Club, and many others...”

### - **Pendills Creek and Sullivan Creek National Fish Hatcheries will:**

- Participate in the Sault Ste. Marie Spring Show and the Soo Locks Festival (MI).

“staffed booths and attended local events including the 2005 Sault Spring Show and Soo Locks Festival...”

- Work with the Friends of Pendills Creek Hatchery to help sponsor public education in conservation in the Brimley, Michigan area (MI).

“...worked with the Friends group this year at the Brimley 4th of July Parade...”

# Public Use

## Mitigation Fisheries

**Our Goal:** The Federal government meets its responsibilities to mitigate for the impacts of Federal water projects, including restoring habitat and/or providing fish and associated technical support to compensate for lost fishing opportunities.

*Our primary focus is on meeting our mitigation responsibilities associated with Lake Taneycomo (Table Rock Dam), Missouri.*

**Our Objective** Meet the Service's responsibilities for mitigating fisheries at Federally funded water projects in the Great Lakes-Big Rivers Region.

### Our Commitment

- **Neosho National Fish Hatchery will:**
  - Culture 225,000 rainbow trout (nine to ten inches) to meet the Federal mitigation responsibilities for the Federally funded water project at Lake Taneycomo (MO).  
“...produced 229,705 rainbow trout (9.5–10.0 inches) to meet the Federal mitigation responsibilities for the Federally funded water project at Lake Taneycomo...”
  - Meet the mitigation production target (MO). (FY05 Department of the Interior Performance Measure).  
“...met the mitigation production target...”
- **La Crosse Fish Health Center will:**
  - Provide annual fish health services to the mitigation program at Neosho NFH (MO)  
“...completed two inspections and the pallid sturgeon assessment as required...”



-USFWS photo by George Gentry



-USFWS

**Historic photo of the Neosho NFH. Neosho NFH was built in 1888 but was renovated in 1961 to produce rainbow trout.**

Neosho NFH, one of the oldest hatcheries still operating, was retrofitted in 1961 to raise rainbow trout to help compensate for the impacts of Federal dams built on the White River in Missouri. Today, Lake Taneycomo is one of the most popular trout fishing locations in the state.

## Cooperation with Native Americans



-USFWS

A lake sturgeon is released after a biologist records measurements and collects tissue samples. Tissue samples are used for genetic analysis. Tribal commercial fishers are providing excellent support by gathering biological information and tagging captured lake sturgeon.



-USFWS photo by Aaron Woldt

Aaron Woldt removes a whitefish from a net. Staff participated in the Technical Fisheries Committee meeting in Roscommon, Michigan, to finalize lake whitefish harvest levels in management units where fisheries are shared between the five CORA tribes and the State of Michigan.



-USFWS

Great Lakes Indian Fish and Wildlife Commission staff prepare to collect walleye using an electrofishing system. Ashland FRO assisted in these surveys to estimate the relative abundance of young-of-the-year walleye in several lakes in northern Wisconsin and Michigan.

**Our Goal:** To assist Tribes in the management, protection, and conservation of their treaty-reserved or statutorily defined trust natural resources.

*Our primary focus is on respecting and promoting Tribal self-government, self-determination and sovereignty of federally recognized Tribes relating to fish and wildlife resource, as defined by the Service's Native American Policy.*

**Our Objective** Provide technical assistance in fisheries science and natural resource management to Tribes and Treaty Authorities in the Region.

### Our Commitment

#### – Regional Office will:

- Work with partners through the Great Lakes Fish and Wildlife Restoration Act Proposal Review Committee to identify and fund native fish and aquatic habitat restoration activities lead by tribal governments (MI, MN, NY, WI).
  - “...the following Restoration Act funded projects were in progress during FY 2005 from previous funding years: Lake Huron lake whitefish distribution study- Chippewa / Ottawa Resources Authority (CORA); Mapping of habitat in tributary and nearshore waters of Lake Superior to facilitate development of quantifiable fish community objectives and lake sturgeon rehabilitation- Bad River Band of Lake Superior Tribe of Chippewa Indians...”
- Support enhancement of capabilities of tribal natural resource departments through functions of the Native American Fish and Wildlife Society (MI, MN, WI).
  - “...supported enhancement of capabilities of tribal natural resource departments through functions of the Native American Fish and Wildlife Society...”
- Support enhancement of tribal natural resource department capabilities and conservation programs through the Tribal Wildlife and Tribal Land Owner Incentive grant programs (MI, MN, WI, IA).
  - “...assigned each field station the task of working with their assigned tribes to inform them of the grant opportunities and to help guide them through the application process for the funds...”
- Develop policy, briefings, and positions to address 1836 Treaty fishery issues raised by the tribal parties to the Executive Council or through the dispute resolution process of the Consent Decree (MI).
  - “...coordinated the involvement of Department of Interior and Fish and Wildlife Service participants in the 2005 Executive Council meeting - prepared briefing materials addressing fishery issues, accompanied the Department's Executive Council representative to the meeting, and completed notes and follow up assignments...”

## Cooperation with Native Americans

### - Alpena Fishery Resources Office will:

- Provide technical assistance to tribes in Michigan according to federal trust responsibilities, reserved rights, tribal management authority and Regional tribal liaison assignments (MI).  
“...provided assistance for implementation of the 2000 Consent Decree to protect treaty fishing opportunities and protect the fishery resources of Lake Huron...”
- Provide technical assistance to Chippewa Ottawa Resource Authority for walleye recruitment surveys in the St. Marys River (MI).  
“...assessed lake whitefish populations in the 1836 Treaty waters of lakes Superior, Huron, and Michigan, in coordination with the Chippewa-Ottawa Treaty Authority and Michigan DNR, as required under the US District Court Consent Decree of August 7, 2000 ...”
- Participate with the Technical Fisheries Committee, Modeling Subcommittee and Executive Council, under the August 7, 2000, U.S. District Court Consent Decree, generating annual harvest limits for tribal fisheries in 1836 Treaty waters (MI).  
“...continued to provide expertise for implementation of the 2000 Consent Decree by serving as Chair of the Technical Fisheries Committee (TFC) and Co-Chair of the Modeling Sub-Committee (MSC); organized and led four meetings of the TFC and two meetings of the MSC; participated on the MSC and conducted population modeling to generate safe harvest limits for state and tribal fisheries in 1836 Treaty waters...”
- Process coded-wire tags from lake trout captured in tribal commercial, subsistence and assessment to recover data beneficial to lake trout rehabilitation in 1836 Treaty waters of Lake Huron (MI).  
“...processed and updated 1,000 lake trout coded-wire tags for inclusion in the Lake Huron coded-wire tag database...”

### - Ashland Fishery Resources Office will:

- Provide technical assistance to tribes in Minnesota, Wisconsin and Michigan according to federal trust responsibilities, reserved rights, tribal management authority and Regional tribal liaison assignments (MI, MN, WI).  
“...provided assistance to the Great Lakes Indian Fish and Wildlife Commission and the Wisconsin DNR with spring and fall walleye population surveys on 35 Ceded Territory lakes; Midwest Tribal Aquaculture Network (MTAN) - assisted tribal hatchery programs by sharing cool/cold water fish culture practices through a quarterly newsletter; Mille Lacs - continued assistance with a multiyear cooperative walleye marking study; Red Lake - continuing to work to restore a naturally spawning population of walleye in Red Lake and bottom trawling to assess abundance of juvenile walleye and forage fish; Grand Portage - discussed control and management options for the expanding populations of double crested cormorants and conducted brook trout surveys; Bay Mills - aged 1,200 lake whitefish scale samples and entered the information into a database; Keweenaw Bay and Red Cliff - conducted lake trout and brook trout assessments, discussed plans to construct two walleye rearing ponds, and completed a brook trout marking project; reviewed and coordinated Tribal grant programs...”
- Provide technical assistance to the Red Lake Band in monitoring the status of walleye populations in Red Lake (MN).  
“...continued to work with the Red Lake Band of Chippewa, Minnesota DNR, Bureau of Indian Affairs, and the University of Minnesota to restore a naturally spawning population of walleye in Red Lake...”
- Provide technical assistance to the Mille Lacs Band in monitoring the status of walleye populations in Mille Lacs Lake (MN).  
“...continued assistance with a walleye marking study on Mille Lacs Lake, Minnesota, between the Great Lakes Indian Fish and Wildlife Commission and Minnesota DNR...”

## Cooperation with Native Americans



-USFWS

**John Netto from the Green Bay FRO develops models to assist managers in setting safe lake whitefish harvest levels.**



-USFWS

**Scott Yess from the La Crosse FRO assisted the White Earth Reservation with a fishery survey of Coleman Creek. This historic brook trout stream has several large beaver dams that negatively impact the brook trout population.**



-USFWS

**Biologist Steve Redman from the Iron River NFH stocks coaster brook trout into the Pigeon River, which is a tributary to Lake Superior with assistance from personnel of the Grand Portage Tribal Resources Department.**

- Provide technical assistance to the Bad River Band in assessing lake sturgeon in the Bad River (WI).  
“...provided technical assistance to the Bad River Band in assessing lake sturgeon in the Bad River...”
- Coordinate and publish the Midwest Tribal Aquaculture Network newsletter (MI, MN, WI).  
“...published a quarterly Internet newsletter (*Midwest Tribal Aquaculture Network*) to assist tribal hatchery programs through the sharing of cool/cold water fish culture practices...”
- **Green Bay Fishery Resources Office will:**
  - Provide technical assistance to tribes in Wisconsin and Michigan (in the Lake Michigan watershed) according to federal trust responsibilities, reserved rights, tribal management authority and Regional tribal liaison assignments (MI, WI).  
“...worked with the Forest County Potawatomi to perform stream electroshocking surveys and lake assessments...”
  - Participate with the Technical Fisheries Committee, Modeling Subcommittee and Executive Council, under the August 7, 2000, U.S. District Court Consent Decree, generating annual harvest limits for tribal fisheries in 1836 Treaty waters (MI).  
“...integrally involved with the Executive Council, Technical Fisheries Committee, and Modeling Subcommittee of the 2000 Consent Decree; primary modeler responsible for generating harvest limits in two tribal whitefish zones, and assisted with the generation of harvest limits in other zones...”
  - Process coded-wire tags from lake trout captured in tribal commercial, subsistence and assessment to recover data beneficial to lake trout rehabilitation in 1836 Treaty waters of Lake Michigan (MI).  
“...extracted and decoded more than 1,500 coded wire tags from lake trout heads turned in by Lake Michigan partner agencies, updated the coded wire tag return database to facilitate analysis of the data, and assisted tribal biologists by aging lake whitefish scales...”
  - Provide technical assistance to the Oneida Tribe of Indians of Wisconsin in assessing the fisheries of Quarry Lake and implementing habitat restoration in Trout Creek (WI).  
“...worked cooperatively with the Oneida Tribe of Indians of Wisconsin to assess fish populations in Quarry Lake, and management steps will be discussed with Tribal directors to implement a plan to address the declining bass and increasing bluegill populations...”

## Cooperation with Native Americans

### – La Crosse Fishery Resources Office will:

- Provide technical assistance to tribes in Wisconsin and Minnesota according to federal trust responsibilities, reserved rights, tribal management authority and Regional tribal liaison assignments (MN, WI).

“...provided technical assistance to Menominee Indian Tribe and White Earth Reservation with data from these surveys used to develop management plans, make immediate fishery recommendations, and develop action plans for 2006 and beyond...”

- Continue efforts to restore lake sturgeon to the White Earth and Menominee Indian Reservations and evaluate stocking success (MN, WI).

“...met with the Menominee and White Earth biologists and Wisconsin and Minnesota DNR’s in coordination meetings for sturgeon restoration on the reservations; conducted stocking assessments with over 4,000 hours of gill net effort over nine nights capturing 442 lake sturgeon on Legend Lake on the Menominee Reservation in FY 2004, and fin rays for estimating age were collected from 250 sturgeon and 260 fish received new tags...”

- Conduct trout stream and lake surveys on the Menominee and White Earth Indian Reservations (MN, WI).

“...conducted trout stream and lake surveys on the Menominee and White Earth reservations for brook trout, brown trout, walleye, and sturgeon...”

- Work with Ashland FRO to monitor walleye populations at Mille Lacs Lake for the Mille Lacs Band and Great Lakes Indian Fish and Wildlife Commission (MN).

“...conducted spring walleye assessments on Ceded Territory lakes for the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) and provided electrofishing equipment to GLIFWC for their use in fall walleye sampling...”

- Harvest walleye at Rydell NWR for stocking on the White Earth Indian Reservation (MN).

“...harvested walleye fingerlings were stocked on the Red Lake Reservation...”

### – Ludington and Marquette Biological Stations will:

- Work cooperatively with the Great Lakes Indian Fish and Wildlife Commission, Chippewa Ottawa Resource Authority, Bad River Band, Red Cliff Band, Grand Traverse Bay Band and Little Traverse Bay Band to implement sea lamprey control activities (MI, WI).

“...implemented five cooperative agreements with the Great Lakes Indian Fish and Wildlife Commission, Chippewa Ottawa Resource Authority, Bad River Band, Red Cliff Band, Grand Traverse Bay Band, and Little Traverse Bay Band for sea lamprey trapping operations on 14 streams in lakes Superior, Michigan, and Huron in which 4,185 lamprey were captured; assisted in the monitoring of the Brule River trapping operation which resulted in 9,478 sea lampreys captured in cooperation with the Great Lakes Indian Fish and Wildlife Commission; conducted a successful lampricide treatment on the Bad River in cooperation with the Bad River Band...”

### – Iron River National Fish Hatchery will:

- Work cooperatively with the Red Cliff Band to enhance brook trout propagation programs to support rehabilitation plans in Lake Superior (WI).

“...worked cooperatively with the Red Cliff Band to develop joint brook trout rehabilitation programs in Lake Superior ...”

- Work cooperatively with the Keweenaw Bay Band to enhance propagation capabilities in support of the Jumbo River rehabilitation program (MI).

“...assisted the Keweenaw Bay Band by supplying brood stock management advice in support of the Jumbo River rehabilitation program...”

## Cooperation with Native Americans



-USFWS

Scott Yess (center) from the La Crosse FRO poses with Randy Zortman (left), White Earth Natural Resources Department, and Joe Hunter (right) from Rainy River First Nations during an egg collection project for lake sturgeon.



-USFWS

This young helper grabs a "big" net full of lake trout. These fish were reared at the Keweenaw Bay Tribal Hatchery until they were cleared of harmful diseases. They will be used at the Iron River NFH as a brood stock.



-USFWS

Staff from the Iron River NFH transfer lake trout to the offshore stocking vessel, M/V Togue. The vessel is scheduled to be replaced in FY 2006 and will improve our stocking and assessment capabilities.

- **Jordan River National Fish Hatchery will:**
  - Provide technical assistance to the Little Traverse Bay Band in the development of a lake trout propagation program (MI).  
 "...received no requests for technical assistance from the Little Traverse Bay Band..."
  - Provide technical assistance to the Chippewa Ottawa Resource Authority's Nunn's Creek Fish Hatchery in enhancing propagation programs (MI).  
 "...received no requests for technical assistance from the Chippewa Ottawa Resource Authority's Nunn's Creek Fish Hatchery..."
- **Pendills Creek National Fish Hatchery will:**
  - Work with the Bay Mills Indian Community, the Sault Ste. Marie Band and the Chippewa Ottawa Resource Authority, to provide technical assistance in fish propagation and develop cooperative natural resource programs (MI).  
 "...continued to consult with Bay Mills Indian Community fishery representatives over current program status and continued to work with a member of the Chippewa Ottawa Resource Authority regarding evaluation of mass marking equipment and implementation proposals; provided 2,000 eyed eggs to the Chippewa Ottawa Resource Authority (CORA) for Early Mortality Syndrome (EMS) research..."
- **La Crosse Fish Health Center will:**
  - Provide technical assistance by hosting workshops, conferences, training opportunities and fish health services for Tribal governments (MI, MN, WI).  
 "...collected 990 fish tissue and fluid samples from rainbow trout and brook trout raised at the tribal hatcheries and inspected the fish for eight fish pathogens as listed in the Great Lakes Fish Health Policy Guidelines..."

**Our Objective** Provide fish from National Fish Hatcheries to support Tribal fish culture programs, subsistence programs, ceremonies, outdoor recreation and resource management activities.

### Our Commitment

- **Genoa National Fish Hatchery will:**
  - Culture 1,500 lake sturgeon yearlings for stocking under an interagency restoration program for the Menominee Indian Reservation (WI).  
 "...stocked 1,500 spring yearling lake sturgeon under the Menominee lake sturgeon restoration plan..."
  - Culture 13,000 Rainy River strain lake sturgeon for stocking under interagency restoration plans for White Earth Indian Reservation and the Red River of the North (MN).  
 "...stocked 25,000 lake sturgeon into waters of the White Earth Reservation according to the White Earth sturgeon restoration plan..."



## Cooperation with Native Americans

- Culture 600 brook trout (10 inches) for stocking under interagency restoration programs at the Red Lake Indian Reservation (MN).
  - “...stocked 450 (12 inch) brook trout at the Red Lake Indian Reservation...”
- Culture six-inch walleye fingerlings for stocking under interagency restoration programs at the Menominee (FY04 – 13,000; FY05 – 3,000), Stockbridge Munsee (FY04 only – 600), Red Lake (FY04 – 21,000; FY05 – 8,000), and White Earth (FY04 only – 52,000) Indian Reservations (MN, WI).
  - “...cultured and stocked 3,000 advanced fingerling walleye in Legend Lake; stocked 8,000 advanced fingerling walleye in Red Lake Indian Reservation waters fully meeting commitments...”
- Culture bluegills, brook trout, largemouth bass, rainbow trout, and walleye, as requested, for recreational fishing on Tribal lands (MI, MN, WI).
  - “..this accomplishment is built into the above accomplishments on Tribal lands...”
- **Iron River National Fish Hatchery will:**
  - Enhance programs and facilities to produce additional lake trout above current goal of 1.2 million yearlings to help meet requirements of the August 7, 2000, Consent Decree (MI,WI).
    - “...installed two new metal buildings to replace the air supported domes, and added a bulk liquid oxygen storage tank to enhance production of additional lake trout above the current goal of 1.2 million yearlings to help meet requirements of the August 7, 2000, Consent Decree...”
  - Provide lake trout yearlings to the Keweenaw Bay Indian Community for stocking into Lake Superior as part of the Memorandum of Understanding through which the Keweenaw Bay Tribal Hatchery operates as a brood stock isolation facility (MI).
    - “...stocked about 90,000 yearling lake trout with coded-wire tags and specific fin clips as part of the Memorandum of Understanding through which the Keweenaw Bay Tribal Hatchery operates as a brood stock isolation facility...”
- **Jordan River National Fish Hatchery will:**
  - Enhance programs and facilities to produce additional lake trout above the current goal of 1.8 million yearlings to help meet requirements of the August 7, 2000, Consent Decree (MI).
    - “...produced an additional 351,000 lake trout through careful water management in an effort to meet requirements of the August 7, 2000, Consent Decree...”
- **Pendills Creek National Fish Hatchery will:**
  - Enhance programs and existing facilities to produce additional lake trout above the current goal of 750,000 yearlings to help meet the requirements of the August 7, 2000, Consent Decree (MI).
    - “...working to enhance the current facilities so additional fish production can occur, with recent improvements including the new brood stock building at Sullivan Creek NFH and a new water treatment system with filtration and oxygen supplementation capabilities under construction at Pendills Creek NFH - the disinfection unit has been eliminated from the project until future funding is secured...”
  - Construct new hatchery facilities and double lake trout production to meet the requirements of the August 7, 2000, Consent Decree (MI).
    - “...have a construction project developed for new hatchery facilities that will double lake trout production to meet the requirements of the August 7, 2000, Consent Decree...”
- **La Crosse Fish Health Center will:**
  - Conduct fish health assessments as part of interagency lake sturgeon restoration efforts on the Menominee Indian Reservation (WI).
    - “...provided histological services for importation purposes...”

## Coordination with Tribal Governments

The area of the United States encompassed by the Great Lakes – Big Rivers Region of the U. S. Fish and Wildlife Service is home to 36 federally recognized tribes, bands, and communities, and 3 intertribal organizations. The fish, wildlife and natural resource interests of Native Americans in our Region cover large areas included under the Treaties of 1836, 1837, 1842 and 1854. These lands and waters contain a great diversity of plant and animal life managed under authorities of tribal governments and states.

The Federal Government, Department of Interior, and Fish and Wildlife Service, have trust responsibilities to assist Native Americans in protecting, conserving and utilizing their reserved, treaty guaranteed, or statutorily identified trust assets. The Service adopted a Native American Policy in 1994 with the express purpose to articulate the general principles that will guide the service's government-to-government relationship to Native American governments in the conservation of fish and wildlife resources.

For the Service's Region 3 Fisheries Program, the most important aspects of fulfilling trust responsibilities to tribes are to provide consultation, technical assistance, cooperative partnerships and training opportunities to Native American fish and wildlife professionals, consistent with the principles of tribal self-determination and self-governance.

Effective and efficient coordination with tribal natural resource programs is therefore one of our most important goals. We will hold regular coordination meetings with tribes and continue the more frequent communication that occurs between tribes, our Fishery Resources Offices, and National Fish Hatcheries, in planning and implementing conservation activities.

In order to establish the most direct and efficient lines of communication between tribes and the Service's Fishery Program in this Region, we have assigned each of our Fishery Resources Offices the lead responsibility for supporting the needs of several recognized Native American groups in the Great Lakes – Big Rivers Region, as outlined here.



-USFWS

**Alpena FRO staff set experimental gill nets as part of the fishery independent lake whitefish survey in 1836 Treaty waters of Northern Lake Huron.**

### **The Alpena FRO is responsible for working with:**

Chippewa Ottawa Resource Authority

Bay Mills Indian Community

Sault Ste. Marie Tribe of Chippewa Indians

Saginaw Chippewa Indian Tribe of Michigan

Match-E-Be-Nash-She-Wish Band of Potawatomi Indians of Michigan

Pokagon Band of Potawatomi Indians

Nottawaseppi Huron Band of Potawatomi

## Coordination with Tribal Governments



-USFWS

**Ashland FRO and Fond du Lac Band staff are ready for a lake sturgeon assessment on the St. Louis River. Fin samples are taken from captured fish for genetic analysis.**



-USFWS

**The Bad River Band of Lake Superior Chippewa Wildlife Department completed the second year of a three year study to assess sora, Virginia, and yellow rail populations in the wild rice dominated wetlands of the Kakagon/Bad River wetland complex.**



-USFWS

**White Earth Department of Natural Resources Biologist Will Bement holds a lake sturgeon that was caught in Round Lake on the White Earth Reservation. Lake sturgeon have been re-introduced on the reservation by the White Earth DNR, Fish and Wildlife Service, and others.**

### **The Ashland FRO is responsible for working with:**

Great Lakes Indian Fish and Wildlife Commission  
1854 Authority

Bois Forte (Nett Lake) Lake Superior Band of Chippewa Indians  
Fond du Lac (Lake Superior) Band of Chippewa Indians  
Grand Portage (Lake Superior) Band of Chippewa Indians  
Mille Lacs Band of Ojibwe  
Red Lake Band of Chippewa Indians  
Leech Lake Band of Ojibwe  
Keweenaw Bay Indian Community  
Lac Vieux Desert Band of Lake Superior Chippewa Indians  
Bad River Band of Lake Superior Tribe of Chippewa Indians  
Lac Courte Orielles Band  
Lac du Flambeau Band of Lake Superior Chippewa Indians  
Red Cliff Band of Lake Superior Chippewa Indians  
Sakaogon Chippewa (Mole Lake) Community of Wisconsin  
St. Croix Chippewa Indians of Wisconsin

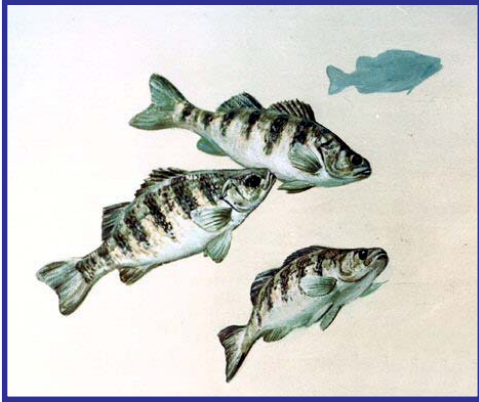
### **The Green Bay FRO is responsible for working with:**

Oneida Tribe of Indians of Wisconsin  
Mohican Nation Stockbridge-Munsee Band  
Hannahville Indian Community  
Forest County Potawatomi Community  
Grand Traverse Bay Band of Ottawa and Chippewa Indians  
Little Traverse Bay Bands of Odawa Indians  
Little River Band of Ottawa Indians

### **The LaCrosse FRO is responsible for working with:**

White Earth Band of Chippewa  
Menominee Indian Tribe of Wisconsin  
Shakopee Mdewakanton Sioux Community  
Upper Sioux Community of Minnesota  
Lower Sioux Indian Community in Minnesota  
Prairie Island Indian Community  
Sac and Fox Tribe of the Mississippi in Iowa  
Stockbridge Munsee Community  
Ho-Chunk Nation

## Leadership in Science and Technology



-USFWS

Alpena FRO collected genetics samples from yellow perch for research conducted by Dr. Carol Stepien at the University of Toledo. She will be using the samples to develop a high-resolution, low cost DNA data base for analyzing fish stock structure in the Great Lakes.



-USFWS

This radio-tagged lake sturgeon is part of the St. Louis River lake sturgeon telemetry study in cooperation with the Grand Portage Band of Lake Superior Chippewa and the 1854 Tribal Authority.



-USFWS

Paddlefish that are captured during assessment activities provide information for the Mississippi Interstate Cooperative Resource Association Sturgeon and Paddlefish Stock Assessment Database. The database is managed by the Columbia FRO.

**Our Goal:** Science developed and used by Service employees for aquatic resource restoration and management is state-of-the-art, scientifically sound and legally defensible, and technological advances in fisheries science developed by Service employees are available to partners.

*Our primary focus is on developing, applying, and disseminating state-of-the-art science and technology to conserve and manage aquatic resources.*

**Our Objective** Utilize state-of-the-art, scientifically sound, legally defensible scientific and technologic tools to formulate and execute fishery related plans and policies.

### Our Commitment

#### - Alpena Fishery Resources Office will:

- Participate in the development and use of Geographic Information Systems capability to support aquatic habitat conservation activities for Lake Huron and Lake Erie (MI, OH).
  - “...employed Geographic Information System capabilities to provide assistance to station staff and intra- and inter-agency biologists to support habitat and aquatic species conservation which included work on updates for Fish Passage and Partners for Fish and Wildlife projects completed by station staff and a poster illustrating the lake trout stocking program using the offshore stocking vessel, *M/V Togue*...”
- Contribute to lake-wide assessment plans and fish community and environmental objectives for Lakes Huron and Erie, through the Great Lakes Fishery Commission (MI, OH).
  - “...continued to provide technical support for joint projects addressing the Lake Huron Fish Community Objectives and participated on an Environmental Objectives drafting team for the Lake Huron Committee...”
- Evaluate and define genetic characteristics of lake sturgeon and contribute to restoration planning and workshops on these stocks (MI, OH).
  - “...completed a collaborative lake sturgeon genetic analysis project funded by the Great Lakes Fishery Trust and submitted the final report in FY 2004, where the genetics work was conducted by the University of California-Davis and sample collection carried out by Fish and Wildlife Service staff...”
- Conduct statistical catch-at-age modeling of lake trout and lake whitefish populations in northern Lake Huron to produce safe harvest limits for state recreational and tribal commercial fisheries (MI).
  - “...completed updates of Statistical Catch at Age models for two Lake Huron lake trout management units and one lake whitefish management unit...”

## Leadership in Science and Technology

### – Ashland Fishery Resources Office will:

- Contribute to lake-wide assessment plans and fish community objectives for Lake Superior, through the Great Lakes Fishery Commission (MI, MN, WI).  
“...has a Fish and Wildlife Service representative for Lake Superior on the Lake Superior Technical Committee...”
- Contribute to interagency efforts to evaluate and define genetic characteristics of migratory Lake Superior brook trout and to restoration planning and workshops on these stocks (MI, MN, WI).  
“...collected 70 genetic samples from Siskiwit Bay, Big and Little Siskiwit Rivers, and Tobin Harbor on Isle Royale, plus 67 genetic samples from Whittlesey Creek following the guidelines for the Whittlesey Creek Restoration Plan, and samples are being analyzed to determine strain and whether they are stocked or naturally reared fish...”
- Contribute to interagency efforts to evaluate and define genetic characteristics of lake sturgeon and to restoration planning and workshops on these stocks (MI, MN, WI).  
“...completed a summary report detailing lake sturgeon population genetic structure; samples from the mixed stock in Lake Superior continue to be collected and analyzed by geneticists...”
- Participate in the development and use of Geographic Information Systems capability to support aquatic habitat conservation activities for Lake Superior, with initial focus on Whittlesey Creek NWR and Isle Royale National Park (MI, WI).  
“...collecting Geographic Information Systems spatial data for analysis and display of results for work on Whittlesey Creek and at Isle Royale National Park; compiled spacial data on distribution and range expansion for aquatic invasive species in the Western Great Lakes...”

### – Carterville Fishery Resources Office will:

- Manage the Mississippi Interstate Cooperative Resource Association Paddlefish Coded Wire Tag Center to provide consolidated data used to develop interjurisdictional management plans (IL, IN, IA, MN, MO, OH, WI).  
“...transferred operations and management of the Mississippi Interstate Cooperative Resource Association Paddlefish Coded Wire Tag Center to the Columbia FRO...”

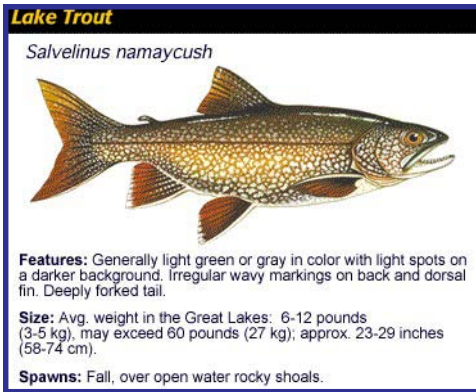
### – Columbia Fishery Resources Office will:

- Manage and analyze data in the Mississippi Interstate Cooperative Resource Association Paddlefish Stock Assessment Database to help develop interjurisdictional management plans (IL, IN, IA, MN, MO, OH, WI).  
“...served as the database manager for the Mississippi Interstate Cooperative Resource Association Paddlefish Stock Assessment database; made modifications to the database to allow for better transfer of paddlefish tagging information to the state; efforts will assist the member states in developing paddlefish management plans...”

### – Green Bay Fishery Resources Office will:

- Provide technical assistance to the other Service’s Great Lakes fisheries stations through the Great Lakes Fishery Analyst (IL, IN, MI, MN, NY, OH, PA, WI).  
“...provided statistical advice on field sampling to other Fish and Wildlife Service Great Lakes fisheries stations...”
- Provide technical leadership by chairing the Lake Michigan Lake Trout Task Group and Lake Sturgeon Task Group (IL, IN, MI, WI).  
“...serve as the chair and members of the Lake Trout Task Group and the Lake Sturgeon Task Group, each with the charge to draft a lakewide rehabilitation plan for each species; conducted a substantial proportion of the overall lake-wide survey effort with results of studies on lake trout and lake sturgeon presented and discussed at the Technical Committee meeting...”
- Contribute to lake-wide assessment plans and fish community objectives for Lake Michigan, through the Great Lakes Fishery Commission (IL, IN, MI, WI).  
“...actively participates on the Lake Michigan Technical Committee of the Lake Michigan Committee under the structure of the Great Lakes Fishery Commission...”

## Leadership in Science and Technology



-USFWS

Neosho NFH staff continue to refine culture techniques for endangered pallid sturgeon.



-USFWS

Biologists stock adult coaster brook trout into Whittlesey Creek, Wisconsin. Nineteen of the adults contain a surgically implanted radio transmitter. Information from the transmitter will be used to examine migratory behavior and habitat use.

- Evaluate and define genetic characteristics of lake sturgeon and contribute to restoration planning and workshops on these stocks (IL, IN, MI, WI).

“...draft of a document providing guidelines for genetic conservation, propagation, and stocking of lake sturgeon in Lake Michigan was completed by the Lake Michigan Lake Sturgeon Task Group and is being used to direct rehabilitation stocking of lake sturgeon in Lake Michigan...”

### – Iron River National Fish Hatchery will:

- Refine fish culture and husbandry techniques in order to produce the highest quality lake trout possible (IL, IN, MI, MN, WI).

“... continued to refine fish culture and husbandry techniques in order to produce the highest quality lake trout possible which included the installation of low head oxygenation equipment that has greatly enhanced the living environment of the cultured fishes...”

- Develop methods to manipulate lake trout brood stock spawning cycles and incubation periods, by delaying maturation and chilling eggs, to better meet production requirements (IL, IN, MI, NY, WI).

“...developed methods to manipulate lake trout brood stock spawning cycles through the use of extended photo period manipulations – this technique is being applied to the entire Lewis Lake brood stock population at Saratoga NFH, Wyoming, to delay the spawning of that strain to better meet production requirements...”

### – Jordan River National Fish Hatchery will:

- Refine fish culture and husbandry techniques in order to produce the highest quality lake trout possible (MN, IL, IN, MI, WI).

“...refined oxygen management, fish loading, feeding regimen, and Goede’s Fish Health Parameters to produce the highest quality lake trout possible...”

- Prepare a comprehensive lake trout rehabilitation plan for the Service’s Great Lakes operations covering all aspects of propagation and stocking (IL, IN, MI, WI).

“...prepared a comprehensive lake trout rehabilitation plan for the Fish and Wildlife Service’s Great Lakes operations covering all aspects of propagation and stocking...”

### – Neosho National Fish Hatchery will:

- Continue to refine density requirements for pallid sturgeon (MO, KS, IA, NE).

“...continued to refine density requirements for pallid sturgeon throughout the fiscal year; made several modifications by adding additional rearing space to existing building, tanks, recirculating pumps, etc. to isolate the pallid sturgeon in a secure location and increase survival...”

## Leadership in Science and Technology

- **Pendills Creek National Fish Hatchery will:**
  - Refine fish culture and husbandry techniques in order to produce the highest quality lake trout possible (IL, IN, MI, WI).  
“...continue to work on diet trials to improve early life stage rearing...”
- **La Crosse Fish Health Center will:**
  - Provide fish health services to states, tribes, and private aquaculturists during any fish health emergency (IL, IN, IA, OH, MI, MN, MO, WI).  
“...experienced no emergencies...”
  - Maintain a modern, operational laboratory able to conduct highly technical laboratory procedures (IL, IN, IA, OH, MI, MN, MO, WI).  
“...maintained the laboratory standards to conduct highly technical laboratory procedures...”

**Our Objective** Develop and share state-of-the-art, scientifically sound, legally defensible scientific and technology tools with other Service programs, States, Tribes, partners, and other stakeholders.

### Our Commitment

- **Regional Office will:**
  - Work with partners through the Great Lakes Fish and Wildlife Restoration Act Proposal Review Committee to identify and fund state-of-the-art science to enhance conservation of Great Lakes fishery resources (IL, IN, MI, MN, NY, OH, PA, WI).  
“...the following Restoration Act funded projects were in progress from previous funding years or received initial year of funding during FY 2005: Use of unmanned submersibles to study lake trout spawning on the Lake Michigan mid-lake reef- University of Wisconsin- Milwaukee; Evaluations of pilot-scale venturi oxygen stripping to prevent ballast water invasions- University of Maryland Center for Environmental Science; Otolith microchemistry for percid production in Lake Erie- Great Lakes Fishery Commission; A geographic information system (GIS) for Great Lakes aquatic habitat- University of Michigan- Ann Arbor; Comparative bioenergetic modeling of lake whitefish populations in Lake Erie and Lake Ontario- Great Lakes Fishery Commission; Lake sturgeon rehabilitation using stream-side rearing facilities in Manitowoc River, a tributary of Lake Michigan- Wisconsin Department of Natural Resources; Development of a GIS for Great Lakes aquatic habitat: Lakes Superior and Ontario- University of Michigan...”
  - Work with other Service Programs to identify research priorities for U.S. Geological Survey under the Science Support Program.  
“...worked with other Programs to rank proposals submitted by the U.S. Geological Survey scientists to the Science Support Program; the list of Regional research project priorities was approved by the Regional Director and then sent to the Washington Office Science Coordinator...”
  - Work with partners and stakeholders to establish an Aquatic Resource Technology Center, enhancing science capabilities in the Region.  
“...made limited progress on this commitment; approached many agencies and organizations that provided support for the concept, and we continue to push forward...”

## Leadership in Science and Technology



-USFWS

Technicians from Northwest Marine Technology describe the clipping and tagging trailer which was tested at the Iron River NFH for mass marking lake trout.



-USFWS

Andy Starostka holds a Federally endangered pallid sturgeon that was captured with an otter trawl during a fishery assessment in the Missouri River. This individual was reared in a fish hatchery.



-USFWS

Green Bay FRO and Wisconsin DNR biologists work cooperatively to enhance yellow perch stock assessment capabilities.

### - Alpena Fishery Resources Office will:

- Investigate the use of mass marking technology for use in conducting studies of hatchery lake trout life history in Lake Huron (MI).

“...monitored the mass marking demonstration in FY 2004 at the Platte State Fish Hatchery to evaluate its potential use for the lake trout program, and input provided to the Evaluation Team...”

### - Ashland Fishery Resources Office will:

- Develop and transfer expertise in state-of-the-art techniques in riparian and hydrology restoration and analysis for fish habitat (MI, MN, WI).

“...designed an Internet training program for road builders and the public in the design and installation of “Fish Friendly” road crossings...”

### - Columbia Fishery Resources Office will:

- Work with the U.S. Geological Survey to determine the highest priority needs for research on the Missouri River, specifically related to endangered pallid sturgeon (IA, MO).

“...coordinated with the U.S. Geological Survey to capture adult pallid sturgeon for telemetry tracking in the Missouri River; evaluated the spatial distribution of hatchery stocked pallid sturgeon with results indicating that stocked fish were likely to move upstream, occupy similar habitats as adult pallid sturgeon, and stocking is making a contribution to re-establish the species; worked with the U.S. Geological Survey and other state, Federal, and academic partners to prioritize research needs for the recovery of the pallid sturgeon in the Lower Missouri River and Middle Mississippi River...”

- Develop large river trawling technology and techniques for application on the Missouri River (IA, MO).

“...developed and tested new trawl types required to evaluate sturgeon and benthic fishes in the Missouri River using ever-evolving technology, and enlisted the expertise of professional trawl manufacturers to achieve the best fit for the specific environmental conditions found in the Missouri River...”

- Provide support to the U.S. Geological Survey pallid sturgeon telemetry project for determining the life history and habitat use in the Lower Missouri River (IA, KS, MO, NE).

“...tracked pallid sturgeon using telemetry technology in cooperation with the U.S. Geological Survey (USGS) resulting in an understanding of the habitat requirements and preference of pallid sturgeon in the Lower Missouri River; captured pallid sturgeon and shovelnose sturgeon and implanted them with telemetry sending units by the USGS; recaptured pallid and shovelnose sturgeon to retrieve old telemetry tags...”



## Leadership in Science and Technology

### – Green Bay Fishery Resources Office will:

- Investigate the use of mass marking technology for use in conducting studies of hatchery lake trout life history in Lake Michigan and Lake Huron (IL, IN, MI, WI).  
“...actively served on the Mass Marking Task Force, Great Lakes Fishery Commission, by working with hatchery personnel and the principal vendor to demonstrate the technology to state and tribal partners at Iron River NFH, and to develop a progress report to the Council of Lake Committees/Great Lakes Fishery Commission on cost and feasibility of bringing this technology to the Great Lakes...”
- Work cooperatively with the Wisconsin DNR to develop population models for lake whitefish and yellow perch in Lake Michigan and lake trout in Lake Superior (WI).  
“...provided data analysis and a population model to Wisconsin DNR to assist with harvest management and recovery of yellow perch in Green Bay, Wisconsin; developed a Statistical Catch at Age model for the Northern Moonlight Bay lake whitefish stock with the available data and generated estimates of stock abundance...”
- Provide technical leadership in the design, construction and operation of a new offshore stocking and lake trout assessment vessel, the Spencer F. Baird, to enhance lake trout restoration in Lake Huron and Lake Michigan (IL, IN, MI, WI).  
“...provided input on stock assessment equipment needs for the Spencer F. Baird, participated in a selection process for awarding the construction contract, and continue to provide technical input on all matters related to the science mission during construction and outfitting ...”

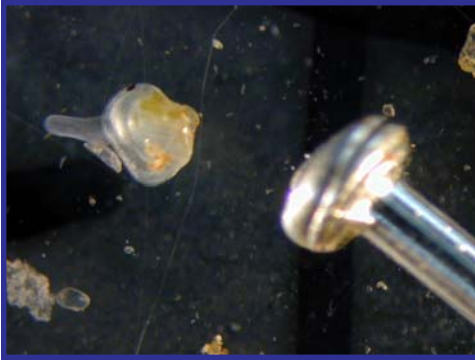
### – La Crosse Fishery Resources Office will:

- Work with the U.S. Geological Survey to develop laboratory methods to define life history characteristics and for propagating the endangered winged mapleleaf mussel (MN, WI). (**new project in FY05**)  
“...applied fish host findings to artificially propagate winged mapleleaf juveniles for augmentation of existing populations and for re-introduction at Mississippi River basin sites within the species’ historic range with thermal studies indicating that the date of juvenile mussel encystment can be predicted with a high degree of certainty...”

### – Ludington and Marquette Biological Stations will:

- Analyze and implement results of the larval assessment and sterile male release technique peer reviews as part of sea lamprey control operations (IL, IN, MI, MN, NY, OH, PA, WI).  
“...implementation and evaluation of the sterile-male-release technique is proceeding in a highly effective and efficient manner as noted by the expert panel review - compelling evidence indicates that the technique has reduced recruitment of sea lampreys in the St. Marys River, and that it is a vital part of the integrated control strategy; evaluating recommendations by the panel including understanding recruitment variation, enhancements to trapping sea lampreys, and investigation of the potential of using females for sterilization; collaborated on a research theme paper to promote a collaborative link with outside researchers to further understanding of the technique – co-authored a publication using a deterministic model to express the suppressive effects of sterile male and sterile female releases; a four year field trial of sterile female release is proposed; employed new traps and trapping techniques in 2005...”
- Participate in the development of experimental pheromone release technique as an alternative sea lamprey control measure (IL, IN, MI, MN, NY, OH, PA, WI).  
“...has been an integral partner and leader in field evaluation of sea lamprey pheromones with field trials during 2005 demonstrating a strong tendency for migrating sea lampreys to enter a tributary and traps that are treated with larval extract vs. a tributary and traps that were not treated, and ovulating females were more attracted to traps baited with more spermiating males than traps baited with fewer spermiated males when given equal opportunity to enter all traps in a stream; submitted results of these field trials for publication; co-authored a publication using a deterministic model to examine the suppressive effects of several potential pheromone control strategies...”

## Leadership in Science and Technology



-USFWS

A juvenile mussel shown next to the head of a pin. Genoa NFH staff is working with scientists to detect genetic markers in tiny juvenile mussels.



-USFWS

Steve Redman monitors water quality for an experimental hydrogen peroxide egg treatment at the Iron River NFH. Staff have published the results of the study entitled *Efficacy of Hydrogen Peroxide and Formalin to Control Saprolegniasis on Lake Trout (*Salvelinus Namaycush*) Eggs*.



Spencer F. Baird

Construction will be completed in 2006 for the new Great Lakes fish stocking and hatchery product evaluation vessel, M/V Spencer F. Baird.

### - Ludington and Marquette Biological Stations also:

“...undertook a two year effort to identify and survey over 20 lentic areas offshore of stream mouths using a ROXANN seabed classification device to evaluate the potential contribution of these areas to parasitic stocks of sea lampreys to the lakes in support of reaching the Great Lakes Fishery Commission milestone of estimating sea lamprey recruitment from all sources by 2005. Crews from both the Marquette and the Department of Fisheries and Oceans Canada operated the acoustical device which is integrated with differentially capable GPS onboard a watercraft to rapidly map lentic areas using echo returns from a scientific grade fathometer and interpreted by the ROXANN device. The resulting geographic-based maps estimate the probability of larval infestation and stratify the areas for sampling larval sea lamprey densities using Bayluscide (a deepwater lampricide). These areas can then be considered for lampricide treatment along with all streams in the Great Lakes basin as part of the program (MI, Ontario)...”

“...cooperated with researchers sponsored by the Great Lakes Fishery Commission to develop a new model to rank sea lamprey producing streams for lampricide treatment. Currently, streams expected to produce metamorphosed lampreys the following year are inventoried for both larval sea lamprey densities and habitat quality using a labor intensive quantitative technique. The streams are ranked on cost-effectiveness to remove the lamprey populations and selected for lampricide treatment. The new model attempts to define the optimal level of assessment necessary to select streams for treatment using historical data and a rapid assessment technique to deliver the cost savings to additional lampricide control. The research is a three year study involving PERM scientists from Michigan State University and the sea lamprey control stations (IN, MI, NY, OH, PA, WI, Ontario)...”

### - Genoa National Fish Hatchery will:

- Conduct practical research in cooperation with U.S. Geological Survey on topical disinfection of cool and warm water species of eggs to prevent spread of fish diseases (IL, IN, IA, MN, MO, OH, WI).

“...was unfunded by the U.S. Geological Survey in FY 2005; conducted informal trials at the station that indicated that topical disinfection techniques for walleye/pike are not toxic to eggs, and will be developing topical disinfection procedures for river spawning operations...”

- Culture largemouth bass, northern pike, rainbow trout, smallmouth bass, walleye, and yellow perch for U.S. Geological Survey and university research (WI).

“...provided 80 yellow perch brood stock to the U.S. Geological Survey...”

## Leadership in Science and Technology

- Investigate the effects of fish therapeutants on mussel glochidia infested on fish gills in cooperation with U.S. Geological Survey (IL, IN, IA, MN, MO, OH, WI).  
“...completed the second year of a two year study to investigate the effects of fish therapeutants on mussel glochidia by supplying expertise and labor to enumerate and evaluate effects of chemicals on the successful transformation of juvenile mussels...”
- **Iron River National Fish Hatchery will:**
  - Complete and publish results of a study on the use of peroxide to control pathogens on lake trout eggs (IL, IN, MI, WI).  
“...completed and published results of a study entitled *Efficacy of Hydrogen Peroxide and Formalin to Control Saprolegniasis on Lake Trout (Salvelinus Namaycush) Eggs...*”
  - Investigate the use of mass marking technology for use in conducting studies of hatchery lake trout life history in Lake Michigan and Lake Huron (IL, IN, MI, WI).  
“...hosted multi-agency tours of the Mass Marking Trailer at Iron River NFH in FY 2004; assessed this technology for use in conducting studies of hatchery lake trout life histories in lakes Michigan and Huron...”
- **Jordan River National Fish Hatchery will:**
  - Provide technical leadership in the design, construction and operation of a new offshore stocking and lake trout assessment vessel, the Spencer F. Baird, to enhance lake trout restoration in Lake Huron and Lake Michigan (IL, IN, MI, WI).  
“...provided technical leadership in the design, construction, and operation of a new offshore stocking and lake trout assessment vessel, the Spencer F. Baird, to enhance lake trout restoration in lakes Huron and Michigan; the vessel is currently under construction at Conrad Industries, Morgan City, Louisiana...”
  - Investigate the use of mass marking technology for use in conducting studies of hatchery lake trout life history in Lake Michigan and Lake Huron (IL, IN, MI, WI).  
“...traveled to the Michigan’s Platte River hatchery and Iron River NFH in FY 2004 to view the mass marking demonstration trailer for use in the Great Lakes, and provided comments...”
- **Neosho National Fish Hatchery will:**
  - Experiment with live and dry diets for pallid sturgeon culture as part of the Pallid Sturgeon Recovery effort (MO, KS, IA, NE).  
“...continued to experiment with live and dry diets for pallid sturgeon culture as part of the Pallid Sturgeon Recovery effort; used bloodworms with great success, and de-capsulated brine shrimp are now being used for hatched out fry...”
- **Pendills Creek National Fish Hatchery will:**
  - Investigate the use of mass marking technology for use in conducting studies of hatchery lake trout life history in Lake Michigan and Lake Huron (IL, IN, MI, WI).  
“...continued hatchery membership in the Mass Marking Task Group by evaluating mass marking technology, making recommendations, and analyzing the potential use...”
- **La Crosse Fish Health Center will:**
  - Assist Bozeman, Montana Fish Health Center and National Conservation Training Center to help teach the fish health management short course.  
“...staff was not needed as teachers this fiscal year...”
  - Work with research labs to field test new procedures and techniques (IL, IN, IA, OH, MI, MN, MO, WI).  
“...worked with the U.S. Geological Survey in cooperative studies such as a bacterial project studying *Columnaris* in FY 2004...”
  - Continue to refine the Service’s Fish Health Policies and Guidelines (IL, IN, IA, OH, MI, MN, MO, WI).  
“...addressed the Fish and Wildlife Service’s *Fish Health Policies and Implementation Guidelines*, and new laboratory procedures as a team member on several committees; served as the Investigational New Animal Drug coordinator for Region 3...”

## National Fish Habitat Initiative: A Start to a Solution

The National Fish Habitat Initiative (Initiative) is a nationwide strategy that harnesses the energies, expertise and existing partnerships of state and federal agencies and conservation organizations to focus national attention and resources on common priorities to improve aquatic habitat health.

In response to recommendations from the Sport Fishing and Boating Partnership Council, the Fisheries Program recognized Aquatic Habitat Conservation and Management as one of seven focus areas for the program. The Fisheries Program also committed to work with Federal, State, Tribal and other partners and stakeholders to explore the benefits of a National Aquatic Habitat Plan and determine the appropriate Service role. On September 13, 2003, the International Association of Fish and Wildlife Agencies endorsed the concept and indicated they would take the lead in developing a comprehensive national fisheries habitat plan/strategy and initiate coordination with other existing fisheries habitat activities.

Fisheries leaders met at five locations throughout the U.S. between May and August 2004 to develop strategies and goals for the Initiative. Recommendations from these meetings include fostering geographically-focused, locally-driven, scientifically-based partnerships to protect, restore and enhance the aquatic habitats across the nation. The Initiative is often compared to the highly successful North American Waterfowl Management Plan. The Waterfowl Plan was implemented in the 1980s to forge partnerships for restoration or protection of millions of acres of wetland breeding areas for waterfowl.

**December 2003 Midwest Meeting, Kansas City, Missouri:** The kick-off meeting for the Initiative focused on the Midwest region and covered the Initiative's relationship to a number of multi-state organizations including the Mississippi Interstate Cooperative Resource Association, Great Lakes Fishery Commission and Southeast Aquatic Resources Partnership.

*Aquatic resources in the United States are in decline, and habitat destruction is a principal culprit. Habitat alteration is a contributing factor to 75 percent of all fish extinctions during the past 75 years and 91 percent of fish listings under the Endangered Species Act.*

**Table 1. Current Fish Passage projects funded in Region 3 through FY 2005.**

State	Project Title	Project Type	Year Funded	Lead FRO
IA	Stream Stabilization MO River Watershed	Grade control structures	2003	Columbia
MI	Northern-Lower MI Watershed	Culvert renovation	2003	Alpena
MN	Ottertail Dam Removal	Dam removal	2003	La Crosse
WI	Bark River Culvert	Culvert renovation	2003	Ashland
WI	Bad River Watershed Fish Passage	Culvert renovation	2003	Ashland
MN	Heiberg Dam	Notch dam, and rock ramp	2004	La Crosse
IL	Big Rock Creek	Rock ramp below dam	2004	Cartersville
MO	Mingo National Wildlife Refuge	Refugewater control structure modification	2004	Cartersville
MO	Hickory Road crossing	Low water crossing	2004	Columbia
WI	Vaughan Creek culvert	Culvert renovation	2004	Ashland
WI	Pike River Dam removal	Dam removal	2004	Green Bay
MI	Lower Michigan Watersheds - culverts	Culvert renovation	2004	Alpena
MI	Carp River culverts	Culvert renovation	2004	Green Bay
WI	Jefferson Dam Removal- Rock River	Dam removal	2004	La Crosse
IL	Brewster Creek Dam Removal	Dam removal	2005	Cartersville
MI	Oxbow Road on Oxbow Creek FP Rest.	Culvert renovation	2005	Alpena
MI	Silver Creek Road Crossing; L. Ocqueoc R.	Culvert renovation	2005	Alpena
MI	Kisser Road Crossing on Gillis Creek	Culvert renovation	2005	Alpena
MI	Pine Drive Crossing; AuSable River	Culvert renovation	2005	Alpena
MI	Anderson Creek/Big Manistee River	Culvert renovation	2005	Green Bay
WI	Trout Brook; Bad River Watershed	Culvert renovation	2005	Ashland
WI	Four Hill Flowage	Dam removal	2005	La Crosse
WI	Silver Creek; Bad River Watershed	Fish passage structure installation	2005	Ashland
WI	Vaughan Creek	Culvert renovation	2005	Ashland
MI	Butterfly Creek; Little Manistee River	Culvert renovation	2005	Green Bay

# Aquatic Habitat Conservation and Management

**Our Goal:** America's streams, lakes, estuaries, and wetlands are functional ecosystems that support self-sustaining communities of fish and other aquatic resources.

*Our primary focus is on collaborating with partners to conserve and restore habitats for sturgeon, trout, darters, and other native fish species.*

**Our Objective** Facilitate management of aquatic habitats on national and regional scales by working with States, Tribes, partners and other stakeholders.

## Our Commitment

### – Regional Office will:

- Work with partners and stakeholders through the Great Lakes Fish and Wildlife Restoration Act Proposal Review Committee to identify and fund aquatic habitat enhancement proposals (IL, IN, MI, MN, NY, OH, PA, WI).

“...the following Restoration Act funded projects were in progress from previous funding years or received initial year of funding during FY 2005: Huron-Erie corridor system habitat assessment- changing water levels and effects of global climate change- Ohio State University; A geographic information system (GIS) for Great Lakes aquatic habitat- University of Michigan- Ann Arbor; Mapping of habitat in tributary and nearshore waters of Lake Superior to facilitate development of quantifiable fish community objectives and lake sturgeon rehabilitation- Bad River Band of Lake Superior Tribe of Chippewa Indians; Effects of barriers and fragmentation on riverine fish population ecology and genetics- Great Lakes Fishery Commission; Status of a refuge for native freshwater mussels from impacts of the exotic zebra mussel in the delta area of Lake St. Clair- Great Lakes Fishery Commission; Development of a GIS for Great Lakes aquatic habitat: Lakes Superior and Ontario- University of Michigan...”

- Work with partners and stakeholders to support and develop the National Fisheries Habitat Initiative (IL, IN, IA, MI, MN, MO, OH, WI).

“...assigned Chuck Bronte, Fisheries Biologist from the Green Bay FRO to the Data Team for the National Fish Habitat Initiative. In addition, the Fisheries Program successfully promoted the Driftless Area as one area in the Midwest for inclusion in the Initiative...”



This culvert on Hardwood Creek in Michigan was too small and dark to allow fish to pass under this road (upper). The culvert was replaced with a new structure (below) using funds from partners and the Fish Passage Program.



-USFWS photos



-USFWS

Bottomless culverts are designed to allow uninhibited passage of native fish such as brook trout.

## Aquatic Habitat Conservation and Management



-USFWS

Native brook trout populations will benefit from this project on Michigan's Salmon Trout River. Perched culverts under an eroded crossing were replaced with a clear span bridge providing uninhibited movement of native aquatic species.



-USFWS

A dilapidated culvert was replaced on the Bark River providing uninhibited access by brook trout to 0.7 miles of prime spawning and nursery habitat.



-USFWS

Corey Lee sets a trap net in one of three large scour holes to determine the recreational fishery potential. The scours were created by a Missouri River flood at the Big Muddy National Fish and Wildlife Refuge.

- Work with partners and stakeholders to develop watershed-scale Fish Passage Program Initiatives (IL, IN, IA, MI, MN, MO, OH, WI).

“...completed 7 Fish Passage Program projects removing a total of 11 barriers and restoring 141 miles of stream for native fish; continued or initiated 17 Fish Passage program projects toward removing a total of 25 barriers and restoring 300 miles of stream for native fish...”

– **Alpena Fishery Resources Office will:**

- Develop a systematic aquatic habitat information and evaluation approach for use in prioritizing habitat restoration activities in the Lake Huron and Lake Erie watersheds, in coordination with the Michigan and Ohio DNRs and other partners (MI, OH).

“...coordinated the scheduling of a meeting with Ohio DNR personnel to discuss Fish and Wildlife Service’s Fish Passage, Coastal, and Partners for Fish and Wildlife programs to ensure DNR input on project prioritization...”

- Work with partners to propose, implement, and monitor results of habitat restoration projects through the Service’s Partners for Fish and Wildlife Program, Fish Passage Program and Coastal Program in northern Michigan (MI).

“...have not developed an in depth monitoring program to evaluate the efficacy of program projects; lack funding to do comprehensive follow-ups...”

- Lead the Service’s implementation of the Partners for Fish and Wildlife Program habitat restoration projects in counties of Michigan’s Northern Lower Peninsula (MI).

“...coordinated for delivery of wetland restoration projects at 11 sites restoring 86 acres; coordinated 6 riparian projects improving habitat for 6 stream miles; serves as coordinator of the Partners program for 23 Northern Michigan counties...”

- Work with the Michigan and Ohio DNRs and U.S. Geological Survey to identify and describe juvenile rearing and adult spawning habitat for lake sturgeon in the Saginaw River, St. Clair River and Maumee River (MI, OH).

“...completed a juvenile lake sturgeon project funded by the National Fish & Wildlife Foundation in the St. Clair River in FY 2004 which included sonic tagging and tracking of juvenile fish to locate critical juvenile habitat in the system; conducted the project in partnership with Michigan DNR and U.S. Geological Survey...”

# Aquatic Habitat Conservation and Management

## – Ashland Fishery Resources Office will:

- Develop a systematic aquatic habitat information and evaluation approach for use in prioritizing habitat restoration activities in the Lake Superior watershed, in coordination with the Michigan, Minnesota and Wisconsin DNRs and other partners (MI, MN, WI).  
“...developed a worksheet for numerically ranking grant proposals under the Great Lakes Coastal Program, and the former subcommittee will draft criteria for ranking watersheds to receive priority attention...”
- Work with partners to develop, prioritize and monitor habitat improvement projects through the Service’s Partners for Fish and Wildlife Program, Great Lakes Coastal Program, and Fish Passage Program, and the U.S. Environmental Protection Agency’s Binational Program and Superior Coastal Initiative under the North American Wetlands Conservation Act (MI, MN, WI).  
“...contributed to the restoration or enhancement of 261 acres wetlands, over 16 miles of stream, and 606 acres upland through the Partners for Fish and Wildlife Program; funded 9 projects totaling \$149,000, which contributed to restoration/enhancement of 855 acres of coastal habitat, 54 miles of stream and riparian habitat and 2 fish passage barrier projects that opened 18 miles of stream through the Great Lakes Coastal Program...”
- Work with the appropriate agencies and organizations to help with the restoration of the Bad River Watershed and the five priority Bayfield Peninsula streams; Whittlesey Creek, Sioux River, Raspberry River, Bark River, and Cranberry River (WI).  
“... completed fish passage culvert installation projects on the Bark River and on Vaughn Creek (a Bad River tributary); two major fish passage projects on Silver Creek and one on Trout Brook (also Bad River Tributaries) were planned, designed ,and approved for funding...”
- Co-lead the Service’s implementation of Coastal Program supported aquatic habitat conservation and restoration activities in the upper Great Lakes with East Lansing Field Office (IL, IN, MI, MN, WI).  
“...funded 22 projects through the Great Lakes Coastal Program (with East Lansing Field Office)...”

## – Carterville Fishery Resources Office will:

- Evaluate pallid and shovelnose sturgeon habitat use on the Middle Mississippi River NWR to develop habitat restoration plans (IL, MO).  
“...completed a final report which evaluated the adult and juvenile shovelnose sturgeon populations of the Middle Mississippi River NWR to determine habitat utilization - this report was the culmination of field work completed during fiscal years 2003 and 2004...”
- Provide technical assistance on habitat restoration projects with State and Federal partners within the U.S. Army Corps of Engineers – St. Louis District (IL, MO).  
“...participated on the River Resources Action Team which evaluates habitat projects within the U.S. Army Corps of Engineers – St. Louis District as well as habitat projects within the Upper Mississippi River Environmental Management Program...”
- Serve on interagency teams to develop, prioritize and monitor habitat improvement projects as part of the Upper Mississippi River Environmental Management Program (IL, MO).  
“...participated in the Navigation and Ecosystem Sustainability Program (NESP) working with several partners to develop “Institutional Arrangements” necessary for the NESP to function effectively; provided input into Ecosystem Restoration Planning and habitat restoration at Buffalo Island and the Herculaneum reach; participation in other efforts included attending meetings of the: River Resources Action Team in support of pallid sturgeon recovery; the Environmental Management Program in support of habitat restoration efforts; the Fish and Wildlife Interagency Committee to provide coordination regarding fish and wildlife matters associated with main channel dredging, dredged material disposal, physical river modifications, backwater modifications, and river management studies and investigation...”

# Aquatic Habitat Conservation and Management



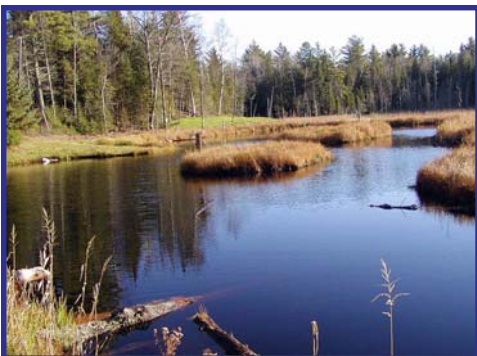
-USFWS

**Plano Dam is one of two dams on the Big Rock Creek that blocks 69 miles of river habitat. A portion of the funding was secured through the Fish Passage program in partnership with the state of Illinois.**



-USFWS

**Tim Yager and Scott Yess work fish out of a fyke net used to evaluate wing dams in Pool 2 of the Mississippi River. This study will provide information on the impacts wing dam notching will have on the fishery.**



-USFWS

**This restoration was one of many completed by the Ashland FRO through the Partners for Fish and Wildlife program.**

## - Columbia Fishery Resources Office will:

- Coordinate and evaluate Missouri River habitat projects with U.S. Army Corps of Engineers, DeSoto NWR, Big Muddy NF&WR, and basin states (IA, KS, MO, NE).  
“...served as a member of the team that was assigned to evaluate Missouri River habitat projects conducted by the U.S. Army Corps of Engineers; worked with both the Big Muddy NF&WR and the DeSoto NWR to coordinate and evaluate their habitat projects on the Missouri River; began fisheries monitoring of shallow water habitat restoration and reference sites on Lower Missouri River as part of cooperative project to assess fish use and project success of shallow water areas...”
- Provide technical assistance for Missouri River habitat projects as part of the Missouri River Mitigation Project Team (IA, KS, MO, NE).  
“...served on the Fisheries Technical Team for the Missouri River Mitigation Project by working with the Columbia Ecological Services office, U.S. Army Corps of Engineers, and state fish and game agencies to establish a monitoring program to evaluate native fish communities in restored and constructed chutes and their associated backwater habitats on the Lower Missouri River - monitoring and evaluation will enable the Mitigation Project Team to determine whether the mitigation sites are performing as expected, and began fisheries monitoring of mitigation and reference sites on Lower Missouri River as part of cooperative project to assess fish use and project success of mitigation areas...”

- Monitor and assess fish communities in portions of the Missouri River to determine fish response to habitat modifications (MO).  
“...monitored changes in the fish community and habitat use in Lisbon chute, a naturally created side channel modified by the Corps of Engineers to maintain the integrity of the navigation channel - recent modifications were made to improve aquatic habitat within the side channel (Lisbon chute is part of Lisbon Bottoms, a unit of the Big Muddy National Fish and Wildlife Refuge)...”

- **Green Bay Fishery Resources Office will:**

- Work with the Illinois, Indiana, Michigan and Wisconsin DNRs to develop a systematic approach to evaluating and prioritizing aquatic habitat restoration activities in the Lake Michigan watershed (IL, IN, MI, WI).  
“...secured funding and then contracted with Purdue University to assist in conducting a study to quantify habitat (both above and below existing barriers) that would be suitable for all life stages of lake sturgeon and use the data to develop a decision tool to aid managers in prioritizing habitat rehabilitation efforts and selecting priority waters for sturgeon rehabilitation efforts...”



## Aquatic Habitat Conservation and Management

- Propose, implement and monitor the results of aquatic habitat improvement projects in the Lake Michigan watershed through the Service's Partners for Fish and Wildlife Program, Fish Passage Program and Coastal Program, working with the Illinois, Indiana, Michigan and Wisconsin DNRs and other partners (IL, IN, MI, WI).

"...worked cooperatively with the Michigan DNR to develop a ranking criteria for habitat restoration projects for Michigan projects within the Lake Michigan basin - working to develop a similar systematic approach with the Wisconsin DNR; worked to develop a Great Lakes basin wide database for field use that monitors aquatic habitat restoration projects completed by Great Lakes FRO's and funded through the Service's Partners for Fish and Wildlife program, Fish Passage program, Fish Habitat Restoration program and the Coastal program; developed a presentation for local, state, and other Federal agencies to provide information relating to Federal assistance programs that can be used to fund projects that conserve native species and their habitats..."

### – La Crosse Fishery Resources Office will:

- Participate in planning ecosystem restoration projects implemented as part of the U.S. Army Corps of Engineers' Upper Mississippi River-Illinois Waterway System Navigation Study (IL, IA, MN, WI).

"...assisted in the design and conducted evaluations of the U.S. Army Corps of Engineer's multimillion dollar Habitat Rehabilitation and Enhancement Projects along the 260 miles of the Upper Mississippi River NW&FR..."

- Serve on interagency teams to develop, prioritize and monitor habitat improvement projects as constructed as part of the Upper Mississippi River Environmental Management Program (IL, IA, MN, WI).

"...served on the Fish and Wildlife Work Group and Fish and Wildlife Interagency Committee teams to develop and prioritize habitat improvement projects for the Environmental Management Program..."

- Participate in planning and evaluation of fish passage improvements at Locks and Dam as part of the Upper Mississippi River Navigation Project (IL, IA, MN, WI).

"...participated in the Fish and Wildlife Work Group to evaluate fish passage on the Upper Mississippi River..."

- Work with the appropriate agencies and organizations to help with the restoration of the Red River Watershed (MN).

"...worked with agencies and organizations to develop Environmental Assessments for 13 sites that are barriers to fish passage on the Red River of the North..."

### – Iron River NFH will:

- Monitor the status of Schacte Creek and Middle Creek watersheds and take action as needed, in coordination with the Wisconsin DNR, to conserve aquatic habitat quality (WI).

"...continued to monitor the status of Schacte Creek and Middle Creek watersheds through extensive hatchery effluent sampling in coordination with the Wisconsin DNR, to conserve aquatic habitat quality..."

### – Jordan River NFH will:

- Work with the Friends of the Jordan River and Michigan DNR to monitor the status of the Jordan River watershed and take action as needed to conserve aquatic habitat quality (MI).

"...participated in the Friends of the Jordan River monthly board meetings and met with Michigan DNR Gaylord Office personnel to discuss the status of the Jordan River watershed to conserve aquatic habitat quality..."

# Aquatic Habitat Conservation and Management



-USFWS

Thunder Bay Power near Alpena, Michigan has a working committee that assists with meeting Federal Energy Regulatory Commission license requirements. Alpena FRO staff represent the Fish and Wildlife Service on the committee and provided guidance for fish passage and other aquatic issues.



-photo by Duane Raver/USFWS

## Alligator Gar

Carterville FRO worked with the Mingo NWR, using funds from the Fish Passage Program, to develop water control structures that are friendly to alligator gar movements. Partners in this project hope to restore alligator gar on this Refuge.



-USFWS

The first open span, low water crossing to benefit the threatened Niangua darter was completed on Lokota Road that spans Thomas Creek in Dalls County, Missouri. The former structure provided zero passage that led to a fragmentation of the population.

## - Pendills Creek and Sullivan Creek NFHs will:

- Work with the U.S. Forest Service, Michigan Department of Environmental Quality and Michigan DNR to monitor the status of the Videans Creek, Pendills Creek and Sullivan Creek watersheds and take action as needed to conserve aquatic habitat quality (MI).

“...continued to work with all area partners ensuring the continued support, safety, and conservation of all hatchery water supplies; worked diligently with Michigan Department of Environmental Quality to maintain all water discharge requirements...”

**Our Objective** Develop and expand the use of Program expertise to assist in avoiding, minimizing, or mitigating impacts of habitat alteration on aquatic species and monitor and evaluate completed projects.

## Our Commitment

### - Alpena Fishery Resources Office will:

- Provide technical assistance to Thunder Bay Power and Michigan DNR to achieve compliance with Federal Energy Regulatory Commission license on the Thunder Bay River (MI).

“...participated in three Work Group meetings to ensure compliance with Articles of License agreement...”

- Provide technical assistance to the Saginaw Bay Natural Resource Damage Assessment for restoration planning and implement aquatic habitat rehabilitation projects (MI).

“...had very little participation in Natural Resource Damage Assessment activities at this phase in the program in FY 2005, but staff receives and reviews minutes from wetland restoration group working at a specific site in Saginaw Bay...”

- Provide technical support to the East Lansing Field Office and the Reynoldsburg Field Office in reviewing permits, licenses, federal projects and other actions proposed for the Lake Huron and Lake Erie basins (MI, OH).

“...reviewed and made comments on a Draft Management Plan for the listed Hungerford’s Crawling Water Beetle in FY 2004, with dialogue between the East Lansing Ecological Services office improving through frequent phone conversations on issues specific to Lake Huron basin with fisheries interests...”

### - Ashland Fishery Resources Office will:

- Provide technical support to the East Lansing Field Office and the Twin Cities Field Office in reviewing permits, licenses, federal projects and other actions proposed for the Lake Superior Basin (MI, MN, WI).

“...provided comments on project proposals and participated in meetings to support Ecological Services offices in Michigan, Minnesota, and Wisconsin...”

# Aquatic Habitat Conservation and Management

## – Carterville Fishery Resources Office will:

- Work with the Service's Ecological Services and National Wildlife Refuge Programs to monitor and evaluate aquatic habitat restoration efforts in the Illinois, Mississippi and Ohio Rivers associated with U.S. Army Corps of Engineers activities (IL, IN, MO, OH).

“...began pre-project monitoring of the fish community in the Herculaneum reach of the Middle Mississippi River to evaluate the effectiveness of habitat restoration efforts - restoration will include notching of wing dikes and constructing chevron dikes will create island and side channel habitat that this particular reach is lacking - conducted surveys of the fish community in this reach to obtain baseline data for evaluating potential benefits of restoration for the fish community...”

- Provide technical assistance to the Illinois DNR with ramping projects to restore fish passage at two dams on Big Rock Creek (IL).

“...provided funding and technical assistance for two fish passage projects on Fox River tributary streams in Northern Illinois with major construction of a project on Big Rock Creek completed and an agreement in place for a project on Brewster Creek...”

## – Columbia Fishery Resources Office will:

- Work with the Service's Ecological Services and National Wildlife Refuge Programs to monitor and evaluate aquatic habitat restoration efforts in the Illinois, Mississippi and Ohio Rivers associated with U.S. Army Corps of Engineers activities (IL, IN, IA, MN, MO, OH, WI).

“...assessed fish community response in Overton chute (an engineered side channel constructed by the Corps of Engineers in 2000 and redesigned in 2002 and managed by Big Muddy National Fish and Wildlife Refuge) - examined seasonal habitat use of the side channel in relation to habitat use of the adjacent navigation channel...”

- Implement aquatic habitat restoration projects for Niangua darters in the Osage River watershed in Missouri and for Topeka shiners in Western Iowa (IA, MO).

“...worked with partners to identify and prioritize fish passage projects and include those projects in the Fishery Operations Needs System and Fish Passage Design Support System...”

## – Green Bay Fishery Resources Office will:

- Provide technical assistance to the Lower Green Bay/Fox River Natural Resource Damage Assessment for restoration planning and implement aquatic habitat rehabilitation projects (WI).

“...worked with the Wisconsin DNR to identify potential wild spotted musky populations available as a donor stock that gametes could be collected from for transfer to the waters of Green Bay; Ontario Ministry of Natural Resources led the sampling of Great Lakes strain muskies from Lake Huron to provide disease samples to the La Crosse FHC for disease testing - of the 41 fish sampled from Lake Huron, one tested positive for piscirickettsial-like-organism - the 15 muskies sampled from the Fox River, Wisconsin, tested clean - information collected by this project will provide the disease information required to allow for the collection of gametes for importation in the spring of 2006...”

- Monitor the effectiveness of the fish barrier net at the Ludington Pumped Storage Hydroelectric plant and determine the annual fish damages as mitigation for the operation of the plant (MI).

“...worked with the Michigan DNR, tribal biologists, and a researcher from Michigan State University to adjust the methodology to assess the damages as a result of the operation of the Ludington Pumped Storage Hydroelectric plant, and served on a net monitoring team to review the effectiveness of the barrier net operated six months out of the year...”

- Propose and implement aquatic habitat rehabilitation projects through the Great Lakes Fishery Trust (MI).

“...worked with the Scientific Advisory Team to develop funding categories and criteria to evaluate project proposals submitted for funding; worked with multiple partners to develop broad projects to address habitat restoration projects to achieve the goals of the Great Lakes Fishery Trust...”

# Aquatic Habitat Conservation and Management



*-photo by Robert J. Hurt*

**Islands constructed in Polander Lake by the U.S. Army Corps of Engineers are part of a Habitat Rehabilitation and Enhancement Project on the Upper Mississippi River. La Crosse FRO and Upper Mississippi River National Wildlife and Fish Refuge staff are studying fish usage at the site.**



*-USFWS photo by Susan Wells*

**Biologist Susan Wells and two volunteers work to stabilize the bank along Crane Creek at the Ottawa NWR.**



*-USFWS*

**Biologist Colby Wrasse sets a fyke net in Swan Lake on the Two Rivers NWR. The Carterville FRO is sampling the lake to provide data on long term trends of the fish community.**

- Provide technical assistance to the Green Bay Field Office to achieve fisheries habitat goals for Federal Energy Regulatory Commission licensed facilities in tributaries to Green Bay (MI, WI).

“...assisted representatives from the Green Bay Ecological Services Field Office with the identification of critical habitat and the articulation of habitat needs for lake sturgeon that may be affected by the operation of the De Pere hydroelectric project on the Fox River and the Menominee and Park Mill hydroelectric projects on the Menominee River and including: reviewing and drafting letters, attending several meetings, and participating on conference calls as part of the re-licensing of these facilities by the Federal Energy Regulatory Commission...”

- Provide technical support to the Green Bay Field Office, East Lansing Field Office and Chicago Field Office in reviewing permits, licenses, federal projects and other actions proposed for the Lake Michigan Basin (IL, IN, MI, WI).

“...assisted the Green Bay and East Lansing Field Offices with section 7 reviews and biological assessments for habitat restoration projects within the Lake Michigan basin...”

## – La Crosse Fishery Resources Office will:

- Work with the Service’s Ecological Services and National Wildlife Refuge Programs to monitor and evaluate aquatic habitat restoration efforts in the Illinois and Mississippi Rivers associated with Corps activities (IL, IA, MN, WI).

“...monitored the fishery near the newly constructed island in Polander Lake in the Upper Mississippi River NW&FR, and worked as part of the Fish and Wildlife Work Group and Fish and Wildlife Interagency Committee that evaluates and plans habitat projects...”

- Provide fish passage technical assistance for the Federal Energy Regulatory Commission re-licensing of the Prairie du Sac Dam (WI).

“...participated with the Green Bay Ecological Services office and the Wisconsin DNR by attending meetings and providing information, especially on paddlefish and sturgeon population in the Wisconsin River that will be used for the Federal Energy Regulatory Commission re-licensing of the Prairie du Sac hydroelectric dam...”

- Implement aquatic habitat restoration projects for trout in Southwest Wisconsin and Northeast Iowa and for sturgeon in the Red River of the North watershed in Minnesota (IA, WI).

“...worked with partners to restore approximately 1,056 feet on three cold water trout streams in the Upper Iowa River Watershed and on 1.1 miles of the W. Fork of the Kickapoo that targeted native brook trout...”

# Aquatic Habitat Conservation and Management

## - La Crosse Fish Health Center will:

- Work with the Service's National Wildlife Refuge Program and other fisheries offices to help assess various water habitats on Service lands to address concerns of fish health and species identification (IL, IN, IA, OH, MI, MN, MO, WI).

“...worked with FRO's and NWR's to assist with studies including the Goby Roundup and Asian carp surveillance...”

**Our Objective** Coordinate with the National Wildlife Refuges System that contains priority species or key habitats to identify and implement opportunities for increasing the quantity and improving the quality of aquatic habitat.

## Our Commitment

### - Alpena Fishery Resources Office will:

- Provide technical assistance to Shiawassee and Ottawa NWRs and the Detroit River International Wildlife Refuge for planning, designing and implementing aquatic habitat restoration projects (MI, OH).

“...conducted a hands on restoration project during National Public Lands Day on the Ottawa NWR with the purpose of the event to reduce sediment loads into Crane Creek, which is a coastal waterway to Lake Erie, and to give the volunteers a chance to be a part of a project which they can watch develop through the years...”

### - Ashland Fishery Resources Office will:

- Provide technical assistance to Whittlesey Creek and Rice Lake NWRs for planning, designing and implementing aquatic habitat restoration projects (MN, WI).

“...implemented a joint plan for management of brook trout in tributary and near shore waters of Wisconsin's Lake Superior basin including an experiment to re-establish a self-sustaining population in Whittlesey Creek on the Whittlesey Creek NWR in cooperation with the Wisconsin DNR, local tribes, non-governmental organizations; worked with partners to install engineered log jams in Whittlesey Creek to reduce stream velocity and provide brook trout habitat; conducted annual monitoring of benchmarks established to assess changes in stream morphology...”

### - Carterville Fishery Resources Office will:

- Conduct post-project biological monitoring to evaluate fisheries age structure response to the Swan Lake Habitat Rehabilitation and Enhancement Project at Two Rivers NWR (IL).

“...studying the age and size structure, recruitment rates, growth rates, and relative weights of four species of native fish (bluegill, black crappie, freshwater drum, and white crappie) and Asian carp for the project, and coordinated the collection of fish in Swan Lake and reference lakes; completed age and growth analysis for fish collected during 2004 and produced an annual summary report; participated in a meeting to discuss the first year of project monitoring...”

- Provide technical assistance to Two Rivers, Crab Orchard, Cypress Creek, Mingo, Mark Twain, Illinois River, Big Oaks, and Patoka NWR's for planning, designing and implementing aquatic habitat restoration projects (IL, IN, MO).

“...initiated pre-project surveys of the fish community in backwaters on the Harlow Island Unit of the Middle Mississippi River NWR (subunit of Mark Twain NWR) to allow the process of evaluating the effectiveness of a habitat restoration project completed through the Navigation and Ecosystem Sustainability Program...”

- Provide technical assistance to Mingo NWR with replacement of screw gates to allow fish passage as part of the Refuge's alligator gar restoration program (MO).

“...provided technical assistance as needed to close out fish passage projects funded in part by the Fish Passage program that make 5,300 acres of wetlands available as critical spawning and nursery habitat for alligator gar; technical assistance and coordination was also provided as needed to move forward the reintroduction of alligator gar into the restored habitat on Mingo NWR...”

# Aquatic Habitat Conservation and Management

- **Columbia Fishery Resources Office will:**
  - Provide technical assistance to the Big Muddy National Fish and Wildlife Refuge and DeSoto, Swan Lake, and Port Louisa NWR's for planning, designing and implementing aquatic habitat restoration projects (IL, IA, MO).

“...assessed recreational fishery resources at DeSoto NWR and at the Overton Bottoms Unit of the Big Muddy NFWR, and outlined strategies to enhance fishing opportunities for the public; planned, designed, and evaluated habitat projects on Big Muddy National Fish and Wildlife Refuge...”
- **Green Bay Fishery Resources Office will:**
  - Provide technical assistance to Seney NWR for planning, designing and implementing projects to enhance brook trout habitat in the Upper Driggs River (MI).

“...provided technical assistance with habitat restoration projects to enhance spawning substrate for native brook trout populations in the Upper Driggs River in FY 2004...”
- **La Crosse Fishery Resources Office will:**
  - Provide technical assistance to the Upper Mississippi River NW&FR, Minnesota Valley, Necedah, Horicon, and Tamarac NWRs for planning, designing and implementing aquatic habitat restoration projects (MN, WI).

“...provided technical assistance to the Upper Mississippi NW&FR through the Environmental Management Program Habitat Rehabilitation and Enhancement Program...”
- **Iron River NFH will:**
  - Work with the Service's National Wildlife Refuge and Ecological Services Programs and other partners to manage 1,200 acres of Service land under management of the Iron River NFH (WI).

“...worked closely with the Whittlesey Creek NWR, Northland College, local neighbors, partners, and the newly established Friends group to manage 1,200 acres of Fish and Wildlife Service land at the Iron River NFH...”
- **Pendills Creek and Sullivan Creek NFHs will:**
  - Assist Green Bay FRO in implementing aquatic habitat evaluation and restoration projects at Seney NWR (MI).

“... offered assistance to the Green Bay FRO and Seney NWR with regard to all aquatic resource issues or needs...”
- **Neosho NFH will:**
  - Work with the Service's National Wildlife Refuge and Ecological Services Programs and other partners to manage 244 acres of Service land under management of the Neosho NFH (MO).

“...worked closely with the National Wildlife Refuge during the fiscal year, as we oversaw a portion of the Ozark Cavefish Refuge that is located on the hatchery; continued efforts to protect the area surrounding the spring by preventing illegal dumping and vandalism, and maintaining the integrity of the spring box to protect the water quality necessary for cavefish survival...”

# Workforce Management



**Our Goal: Maintain and support an adequately sized, strategically positioned workforce with state-of-the-art training, equipment, and technologies in their career fields.**

*Our primary focus is on recruiting, supporting, and positioning an effective and motivated workforce capable of meeting the expectations of employees and partners in fish and other aquatic resource conservation.*

## Our Objectives

- Identify critical staff and functions needed to support various types and sizes of Program offices and be able to fill critical vacancies and gaps in the current workforce with well-qualified individuals.
- Train and develop employees for the most effective utilization of their skills and positions.
- Ensure Program employees and facilities are equipped with the technology, tools, and equipment to effectively and to efficiently conduct their jobs.

## Our Commitment

- Develop business management plans for each office.
- Ensure staffing levels are adequate to meet mission critical goals.
- Initiate recommendations from the Workforce Planning Team for the Fish and Wildlife Management Assistance Program.
- Identify core competencies required for our employees and work with the National Conservation Training Center to develop training opportunities for employees to meet competency levels.
- Ensure that supervisors maintain current Individual Development Plans for their employees and ensure that employees complete individual developmental activities.
- Identify and implement operational, structural, and geographic changes that will help maximize effectiveness and efficiency at field stations.

“...participated as a Region 3 representative to a national Workforce Planning Team by participating in two conference calls and providing input on draft workforce drivers; provided safety training (Red Cross CPR and Defibrillator training, Great Lakes Fire Extinguisher Use training, Defensive Driving training, and Alpena FRO Boat Safety and Maintenance training), conducted monthly and annual facility inspections, held quarterly safety and safety committee meetings, reviewed and updated station safety plans, and purchased watercraft safety equipment and personal protective equipment (Alpena FRO)...”

“...developing a station strategic plan as we work toward a business management plan (Ashland FRO, Carterville FRO)...”

“...maintained Individual Development Plans; operated under an office business management plan; utilized term appointments, emergency hires, students, and volunteers to maintain a staffing level

-USFWS  
**Biologist Lee Newman from the Ashland FRO discusses his catch to Regional Director Robyn Thorson during her visit to Whittlesey Creek NWR.**



-USFWS  
**Ashland FRO and Whittlesey Creek NWR honored their volunteers with a picnic. The FRO received over 500 hours of assistance during FY 2004.**



-USFWS  
**The Youth Conservation Corps work crew at the Iron River NFH are hard at work clearing hiking trails.**

## Workforce Management



-USFWS

Duane Simpson was employed through a Wisconsin Senior program at the Iron River NFH in 2005.

necessary to meet mission critical goals; initiated recommendations from the Workforce Planning Team for the Fish and Wildlife Management Assistance Program; identified core competencies required for employees and worked with the National Conservation Training Center to develop training opportunities for employees to meet competency levels; identified and implemented operational, structural, and geographic changes that will help maximize effectiveness and efficiency at field stations (All stations)..”

“...maintained Individual Development Plans for all of station staff; participated in the Youth Conservation Corps by hiring two enrollees for 10 weeks in the summer (Genoa NFH)..”

“...use the budget tracking system to management office budget, identified training needs and provided training opportunities for staff, completed employee evaluations and identified development opportunities; completed the American Red Cross first aid and CPR refresher course (All stations)..”

“...managers and biologists participated in Great Lakes Technical Committee, National Brood Stock, and Regional Fisheries meetings; staff completed training at nine different courses, and the Project Leader taught at the Cold Water Fish Culture Course (Iron River NFH)..”

“...maintain Individual Development Plans for each employee and review them annually to ensure employees completed their developmental activities; identified core competencies of new employees and provided training classes (Foundations) at the National Conservation Training Center to provide future opportunities; identified and implemented operational, structural, and geographic changes that will help maximize effectiveness and efficiency at field station; ensured adequate staffing levels by using volunteers, hiring emergency hires, and temporary students, and filling vacant positions – eight volunteers provided 1,964 hours assisting with fish culture and maintenance projects; participated in the Senior Community Service Employment Program (Title V) with the Area Agency on Aging; provided CPR, First and/or Safety training to East Lansing Ecological Service, Alpena FRO, Cheboygan Vessel Base, Jordan River NFH, and Seney NWR (Jordan River NFH)..”

“...employed 46 seasonal staff to meet the mission critical goals as detailed in the Memorandum of Agreement with the Great Lakes Fishery Commission; maintained one PhD level SCEP (Seasonal Career Employment Program) student; converted one MS level SCEP student to a full-time permanent biologist; provided 15 formal training opportunities from Individual Development Plans, and on-the-job training for all staff; provided training to maintain competencies in safety related functions such as boat operating, CPR, First Aid, and vehicle operation; worked with personnel from Marquette, Ludington, and Sault Ste. Marie, Ontario, on assessment, alternative control, and lampricide control activities (Marquette and Ludington Biological Stations)..”



-GLFC

CPR and first aid training is an important component in managing the workforce.



-NCTC

**National Conservation Training Center**  
The National Conservation Training Center trains and educates natural resource managers to accomplish common goal of conserving fish, wildlife, plants, and their habitats.



## List of Acronyms

ANS - Aquatic Nuisance Species or AIS - Aquatic Invasive Species  
BUR - Bureau  
Commission - Great Lakes Fishery Commission  
Consent Decree - U.S. District Court Consent Decree  
CORA - Chippewa Ottawa Resource Authority  
DNR - Department of Natural Resources  
ESA - Endangered Species Act  
FERC - Federal Energy Regulatory Commission  
FHC - Fish Health Center  
FONS - Fishery Operational Needs System  
FRO - Fishery Resources Office  
GAO - Government Accounting Office  
GIS - Geographical Information System  
GLIFWC - Great Lakes Indian Fish and Wildlife Commission  
HACCP - Hazard Analysis and Critical Control Point  
MDC - Missouri Department of Conservation  
MICRA - Mississippi Interstate Cooperative Resource Association  
M/V - Motor Vessel  
NF&WR - National Fish and Wildlife Refuge  
NFH - National Fish Hatchery  
NRCS - Natural Resource Conservation Service  
NRDA - Natural Resources Damage Assessment  
NW&FR - National Wildlife and Fish Refuge  
NWR - National Wildlife Refuge  
NWRS - National Wildlife Refuge System  
PIT - Passive Integrated Transponder  
Region - Great Lakes-Big Rivers Region  
Service - U.S. Fish and Wildlife Service  
SP - Strategic Plan

## List of State Acronyms

IA - Iowa  
IL - Illinois  
IN - Indiana  
KS - Kansas  
MI - Michigan  
MN - Minnesota  
MO - Missouri  
NE - Nebraska  
NY - New York  
OH - Ohio  
PA - Pennsylvania  
SD - South Dakota  
WI - Wisconsin

# Appendix Reference

## **Appendix 1 Region 3 Fisheries Program Accomplishments; DOI Strategic Plan Performance Measures; Targets and Accomplishments FY 2005**

Performance measures in Appendix 1 are derived from the U. S. Department of the Interior Strategic Plan FY 2003-2008. The Strategic Plan utilizes a multi-tiered set of goals and associated measures to define and evaluate its strategic direction. The expected results are embodied in end outcome goals and measures. These are the barometer of overall Department performance.

Appendix 1 measures are stepped down to the Region 3 Fisheries program and are captured in internal operational plans. All goals and measures are integrated to ensure that all work is relevant and directed toward identified results oriented goals. Baseline data that would guide target setting are being established in many cases. Where reliable long-term (FY 2008) targets were identified, they are shown parenthetically with the measure. Performance measure targets are established for base Fisheries funding, but are reported by the Fisheries program for all funding sources.

## **Appendix 2 NFHS PART Measure Targets, FY05**

The PART (Program Assessment Rating Tool) was developed to assess and improve program performance so that the Federal government can achieve better results. A PART review helps identify a program's strengths and weaknesses to make informed funding and management decisions aimed at making the program more effective. The PART therefore looks at all factors that affect and reflect program performance including program purpose and design; performance measurement, evaluations, and strategic planning; program management; and program results. Because the PART includes a consistent series of analytical questions, it allows programs to show improvements over time, and allows comparisons between similar programs. Appendix 2 represents measures from the Program Assessment of the *Fish and Wildlife Service - National Fish Hatchery System*.

## **Appendix 3 Fish and Wildlife Management Program Performance Summary, FY2005 Targets and Accomplishments**

Appendix 3 contains measures developed for the Fish and Wildlife Management Assistance program as highlighted in the National Fisheries Program's Strategic Plan. Performance measures are estimated for base Fisheries funding, but are reported by the Fisheries program for all funding sources. Many funding sources other than Fisheries are used to fulfill our mission.

Appendix 1

Region 3 Fisheries Program Accomplishments  
 DOI Strategic Plan Performance Measures  
 Targets and Accomplishments  
 FY 2005

DOI Strategic Plan Mission Goal 1.2  
 Resource Protection: Sustain Biological Communities

PEM 389 PEM.2.001. Percent of species of management concern that are managed to self-sustaining levels, in cooperation with affected States and others, as defined in approved management documents

<b>FY 2005 Actual Data</b>		
% of species of management concern # species managed to self-sustaining levels total number of species	Target	Actual
<b>Fish and Wildlife Mngt. Assistance</b>		
<b>Anadromous Fish Mngt. &amp; Fish and Wildlife Assistance</b>		
# species managed to self-sustaining levels (Actual)	6	6
total number of species	32	32
% of species of management concern	19%	19%

PIM 380 PIM.2.01.001. Habitat restoration: Number of acres restored or enhanced to achieve habitat conditions consistent with management documents, program objectives, and consistent with substantive and procedural requirements of State and Federal water law

<b>FY 2005 Actual Data</b>		
Fish and Wildlife Mngt. Assistance	Target	Actual
<b>Wetlands:</b>		
Fish and Wildlife Mngt. Assistance	0	0
<b>Uplands:</b>		
Fish and Wildlife Mngt. Assistance	0	0

PIM 445 PIM.2.01.002. Habitat restoration: Number of stream/shoreline miles restored or enhanced to achieve habitat conditions consistent with management plans, program objectives, and consistent with applicable substantive and procedural requirements of State and Federal law

<b>FY 2005 Actual Data</b>		
Fish and Wildlife Mngt. Assistance	Target	Actual
Total Stream/Shoreline Miles Restored: (Actual) Fish and Wildlife Mngt. Assistance	0	0

PIM 747

PIM.2.03.003. Facilities condition: Conservation and biological research facilities are in fair or better condition as measured by the Facilities Condition Index

**Summary:**

**FCI  
Total Deferred Maintenance Backlog  
Current Replacement Value**

**Hatchery Operations and Maintenance (1,308 of 2,054 or 64 % with condition assessments)**

Numerator= mission critical water management assets having undergone condition assessment in good or fair cond.

Denominator= mission critical water management assets having undergone condition assessment

<b>FY 2005 Actual Data</b>	Target	Actual
<b>FCI</b>		
<b>Total Deferred Maintenance Backlog</b>		
<b>Current Replacement Value</b>		
<b>Hatchery Operations and Maintenance (1,308 of 2,054 or 64 % with condition assessments)</b>	0.007	0.007
Numerator= mission critical water management assets having undergone condition assessment in good or fair cond.	\$335,084	\$439,019
Denominator= mission critical water management assets having undergone condition assessment	\$51,340,852	\$62,139,713

PEM 391

**DOI Strategic Plan Mission Goal 1.3  
Resource Protection: Protect Cultural and Natural Heritage Resources**

PEM.3.001. Cultural resources: Percent of cultural properties on DOI inventory in good condition

<b>FY 2005 Actual Data</b>	Target	Actual
<b>Hatchery Operations and Maintenance</b>		
<b># in good condition (Actual)</b>	13	17
<b># of cultural properties</b>	20	21
<b>%</b>	65%	81%

RIM 372

RIM.1.03.001 Percent of recreation areas with community partnerships

<b>FY 2005 Actual Data</b>	Target	Actual
<b>Hatchery Operations and Maintenance</b>		
<b># recreation areas baseline</b>	4	5
<b>%</b>	67%	83%

RIM 750

RIM.1.05.001. Facilitated programs: Number of visitors served by facilitated programs

**Hatchery Operations and Maintenance**

SIM 942

<b>FY 2005 Actual Data</b>	Target	Actual
<b>Hatchery Operations and Maintenance</b>	84,902	91,514

Tribal: Percent of planned accomplishments/reintroduction objectives completed.

FY 2005 Actual Data		
%	88%	88%
Objectives completed	15	15
baseline	17	17

XIM 510

**DOI Strategic Plan Mission Goal 4.1 Management**

Volunteers: Number of volunteer hours per year supporting DOI mission activities

FY 2005 Actual Data	Target	Actual
Hatchery Operations and Maintenance	7,961	7,992

## Appendix 2

NFHS PART Measure Targets, FY05	National		Region 3		
	Target	%	Target	Accomp.	%
% of Recovery Plan production tasks implemented	63 80	79%	10 16	10	63%
% of applied science and technology tasks implemented as prescribed Recovery Plans	54 101	53%	3 21	3	14%
<b>Total NFHS priority recovery tasks implemented as prescribed in approved Recovery Plans.</b>	<b>117 181</b>	<b>65%</b>	<b>13 37</b>	<b>13</b>	<b>35%</b>
% of Fishery Management Plan production tasks implemented	278 303	92%	52 61	52	85%
% of applied science and technology tasks implemented as prescribed in Fishery Management Plans	103 206	50%	16 20	16	80%
% of marking and tagging targets met, as prescribed by approved management plans	83 153	54%	11 13	11	85%
<b>Total NFHS priority restoration tasks implemented as prescribed in approved Fishery Management Plans.</b>	<b>464 662</b>	<b>70%</b>	<b>79 94</b>	<b>79</b>	<b>84%</b>
% of post-stocking survival targets met, as prescribed by Recovery Plans, for hatchery propagated listed species	3 14	21%	1 1	1	100%
% of post-stocking survival targets met, as prescribed by Fishery Management Plans, for hatchery propagated depleted species	41 86	48%	0 5	1	20%
% of mitigation production targets met	11 26	42%	1 1	1	100%
% DOI watershed units with current wild fish health surveys	532 2111	25%	36 363	37	10%
Condition of mission critical water management assets as measured by the DOI FCI	0.19		0.01	0.01	
Outcome: Percent of threatened and endangered aquatic species populations, as prescribed in Recovery Plans, that are self-sustaining in the wild	67 461	15%	0 8	0	0%
Pounds/dollar (lbs/\$) of healthy rainbow trout produced for recreation	.37lb/\$1		0.29lb/\$1		

**Appendix 3**  
**Fish and Wildlife Management**  
**Program Performance Summary**  
**FY 2005 targets and Accomplishments**

Measure	Accomplishment	
	Target	Actual
% of species of management concern managed to self-sustaining levels, in cooperation with affected States and others, as defined in approved management plans (SP)	6/32	6/32
% of aquatic threatened or endangered species for which FWMA activities contribute to conservation. (SP)	5/25	5/25
% of aquatic candidate species for which FWMA conducts conservation actions (SP)	2/7	0/2
<i>Habitat Restoration</i> : Number of acres and stream/shoreline miles restored or enhanced to achieve habitat conditions to support species conservation (SP)		
Wetland acres.....	0	0
Upland acres.....	0	0
Stream miles.....	0	
Shoreline miles.....	0	
Stream/Shoreline sum	0	3
Habitat restoration: # of acres/miles re-opened to fish passage (BUR)		
Acres.....	0	34
Miles.....	0	275
	10	20
# of fish passage barriers removed or bypassed (BUR)		
# of populations managed for subsistence fishery harvest (BUR)	0	0
% of populations managed or influenced by the Fisheries Program for which current condition (e.g., quantity and quality) and trend is known (BUR)	102/442	161/443
% of populations managed or influenced by the Fisheries Program with approved management plans (e.g., Recovery Plans, Restoration Plans, Fishery Management Plans, etc.) (BUR)	137/442	UNK.
# of management plans in development, completed, or revised (BUR)	5	45
# of population assessments completed (BUR)	70	125
# of habitat assessments completed (BUR)	10	144
# miles of in-stream and shoreline habitat assessed (BUR)	65	294
# of aquatic outreach and education events (BUR)	10	75
# of training sessions (for Tribes) (BUR)	2	7
# of new or modified cooperative agreements (with Tribes) or Intergovernmental Personnel Act Agreements (BUR)	7	13
# of Tribal consultations (BUR)	1	12

(Unknown)



**Implementing the Vision: Report to Fisheries Partners and Stakeholders  
Region 3, Great Lakes - Big Rivers  
Fiscal Year 2005**

**U.S. Fish & Wildlife Service  
Region 3  
Division of Fisheries  
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